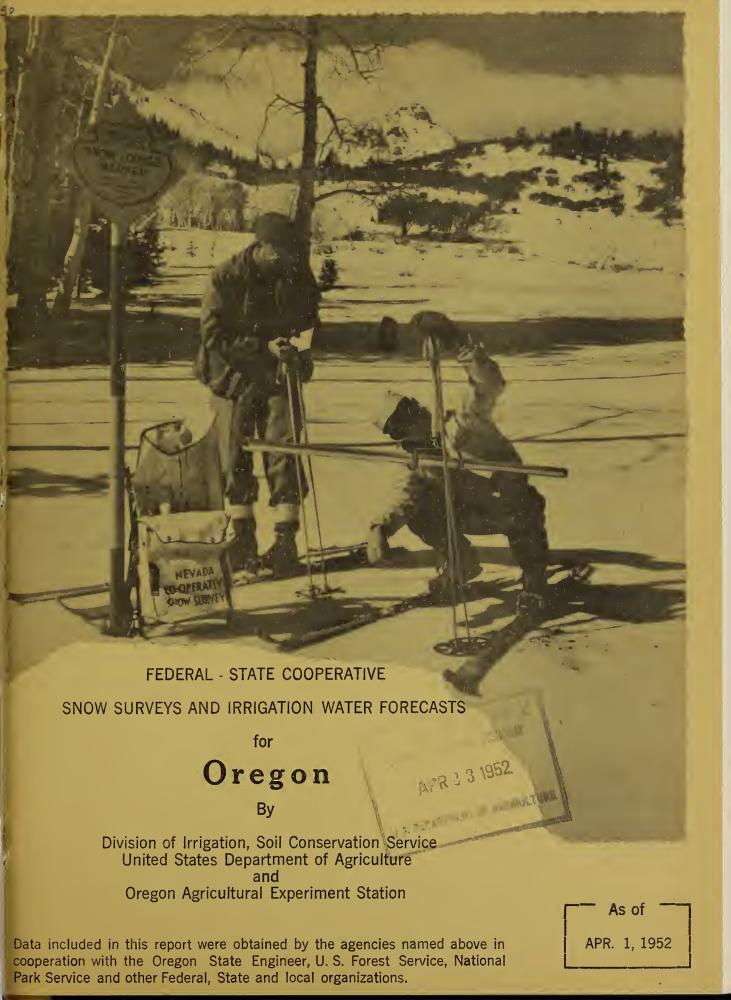
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.







FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR

OREGON

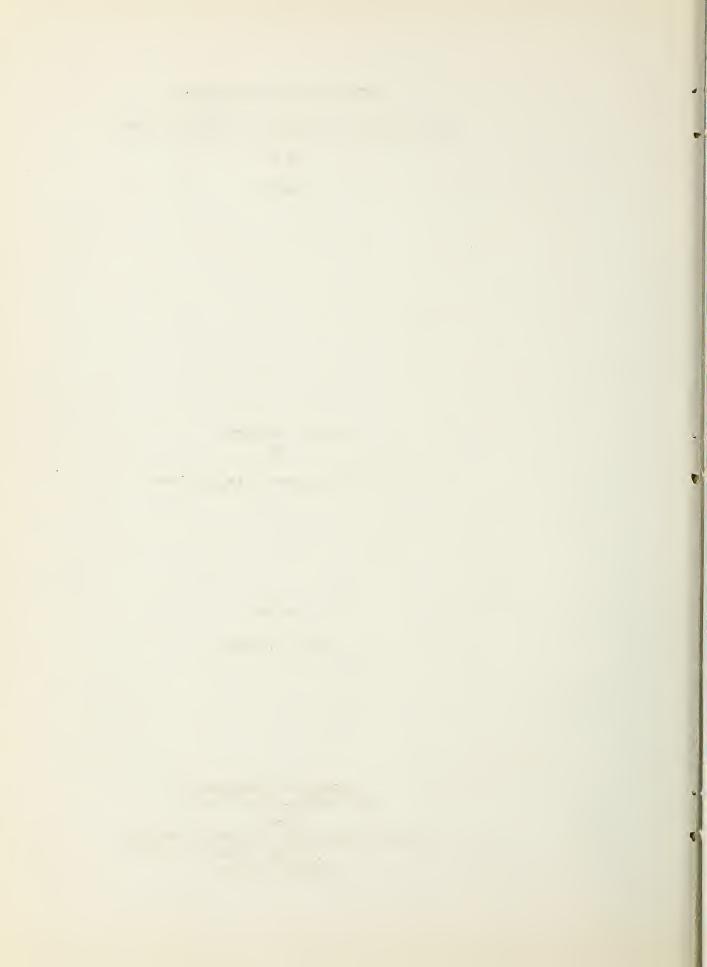
Report Prepared by

W. T. Frost, Hydraulic Engineer

Issued

April 9, 1952

Division of Irrigation
Soil Conservation Service
and
Oregon Agricultural Experiment Station
P. O. Box 1149
Medford, Oregon



	Page
Prospective Water Supply Map	Facing 1
Snow Course Index	Back of Water Supply Map
Water Supply Outlook	1
Streamflow Forecasts April-September April-July	2 -4 5
Reservoir Location Map	Facing 6
Reservoired Water Supplies	6
Snow-Water Percentages by Watershed	7
Forecast Committee Reports	8-25
Snow Survey Measurements April 1, 1952 Willamette Valley Profiles March 15, 1952 Delayed Data Oregon Precipitation	Appendix 1-13 Appendix 14-16 Appendix 17 Appendix 18 Appendix 19
List of Cooperators	Last page

Definition of Terms on Map Following

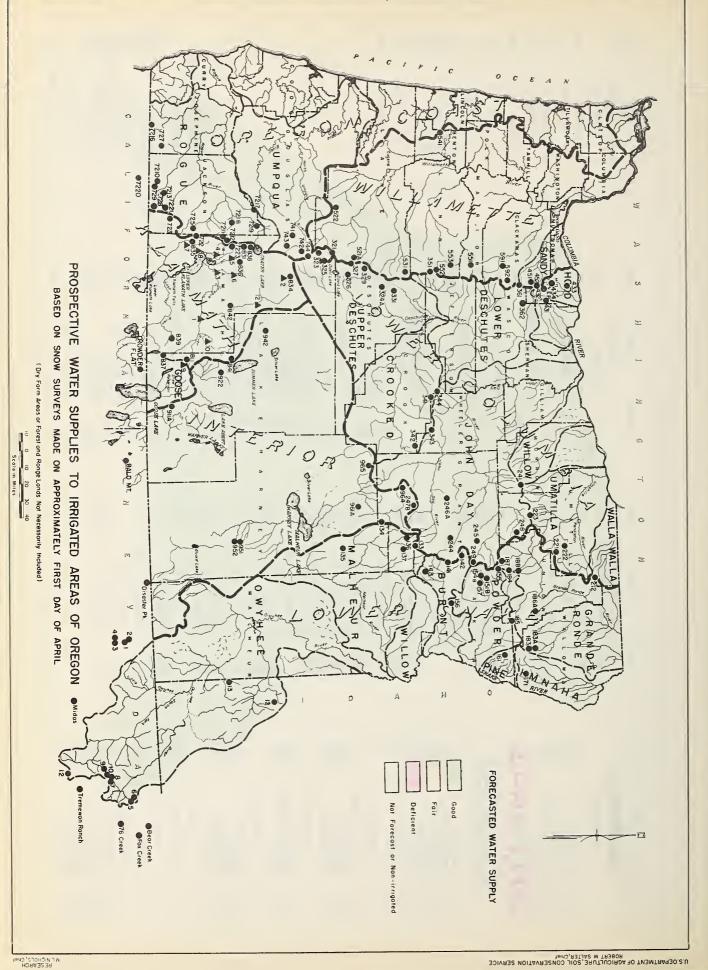
Good - Runoff prospects normal or better, with sufficient flow for all demands of current season, and in the case of holdover reservoirs, for replacement of evaporation and other natural reservoir losses.

Fair - Subnormal runoff prospects, with some deficiency in meeting demands of current season when holdover storage is not available. If holdover storage available, adequate supply for current demands assured by some depletion of holdover storage.

Poor - Greatly subnormal runoff prospects with considerable deficiency of water for demands in current season when holdover storage not available. If holdover storage available, runoff prospects are considered poor if very heavy depletions of holdover storage are necessary to meet current demands.



Elev.			5720		6720		6200		4900		7900	5293 5900	6300		9999																4400	4761	4200	4553	4200	4800		2200
Name	INTERIOR DRAINAGE	WARNER LAKE	Camas Creek	GUANO LAKE	Bald Mountain	CHEWAUCAN RIVER	Mill Creek	SILVER LAKE	Silver Creek	HARNEY BASIN	Fish Creek Idlewild Camp	Izee Suranit	Snow Mountain	MeDERMITT CREEK	Disaster Peak														THE CALIFORNIA OREGON POWER COMPANY SHOW STATIONS	KLAMATH LAKE BASTIN	Beatty (COPCO)	Chemit (COPCO)	Crystal (COPCO)	Kirk (COPCO)	Herriman Lodge (COPCO)	Bly 101 Rench (COPCO)	GOOSE LAKE BASTN	Quartz Bountain (COPCO)
Number			911A		Nev. 1		922		942		962 961A	964	965		Nev. 6																r	ณะก	o ≪1 r	ο ω ε	~ 99	12		Gs.
Elev.		2325	2750 3990		4800	ьl	5500		4500		3620				6316	4216	2800								6500						6016	4760	4850	5450	7200	6100		6320
Name	Santiam Rivers	Breitenbush	Marion Forks Sentiam Junotion	MoKenzie River	MoKenzie	Middle Fork Willamette River	Waldo Lake	Coast Fork Willamette River	Champion	Mary's River	Mary's Peak		OREGON COAST DRAINAGE	UMPQUA RIVER	Dismond Lake	N. Umpque nr. Lake Creek	Windigo Pass	ROGHE RIVER		Althouse Big Red Mountain	Billie Creek Divide	Fournile Lake	Graybaok Feak Robart Lake	Hyatt Prairie Reservoir	Little Red Mountain Seragg Mountain	Seven Lakes No. 1 Seven Lakes No. 2	Silver Burn	South Fork Canal	Wagner Butte Whaleback	KLAMATH LAKE BASIN	Annie Spring	Chemult Crowder Flet	Gerber	Lake of the Woods Park Headquarters	Summer Pin	Sun Hountain Taylor Butte	GOOSE LAKE BASIN	Quartz Mountain
Number		199	553 552		531	241	621A	01	522		541				743	742	744								7210						631	634	639	838	837	636		811
Blev.	[8]		6070		3925	4300		6400	6650	6000 4775	6156		6670 4540	6200		œ:	4400	4860	4760	5400	2600		ort.	3500	4766 4200				4400 6000			3700	8		2400	3600		
Name	LOWER COLUMBIA DRAINAGE	WALLA WALLA RIVER	Tollgate	UMATILLA RIVER	Enigrant Springs	Meachem	JOHN DAY RIVER	Arbuokle Mountain	Dixie Springs	Olive Lake	Starr Ridge	CROOKED RIVER	Derr Marks Creek	Ochoco Meadows	Tenterange	UPPER DESCHUTES RIVER	Caldwell Ranch	Casoade Surmit Charlton Lake	Crescent Lake	Irish-Taylor New Dutchman Flat	Three Creeks Meadows	HILLE IN CLUB FREE	LOWER DESCHUTES RIVER	Clear Lake	Hogg Pass Rook Creek	HOOD RIVER	The old Manual	Greenpoint Reservoir	Red Hill Tilly Jane - Mt. Hood	SANDY RIVER	Phlox Point - Mt. Hoo	Still Creek	WILLAKETTE RIVER BASIN	Clackanas River	Clackamas Lake	Peavine Ridge		
Number			212		222	221		241	244 244	245 245	247B		344	341	246		326	321	325	329 \$24A	351	626		361	352		127	433	454 432		452	451			592	591		
El ov.	DRAINAGE	1 Oregon)		6700 6700			N	0000	o are adjacent	euc to tougo Hol		7200		7200	2002			pring 5900 5875			6	ă	Summdt 5096		VER	7126		res 6400			ws 5400	VER	4250	RIVER		7 7000 F 5340		
мен	UPPER COLDURIA DRAINAGE	(Lower Snake in		Big Bend Fry Canyon	Jack Creek, Low			raylor canyon	to but not on Ownee Drainage and	partially relied and on this watershad.)		Buekeldn, Upper			75 Creek	CONTRACT OF STATE		Blue Mountain Spring	Lake Creek	Rook Spring Stinking Water	Carrie and	BUKEL KLV	Barney Creek Blue Mountain S	Tipton	POWDER RIVER	Anthony Lake	Bourne	Ellertson Meadows	Goodrich Lake	PINE CREEK	Sehneider Meadows	DANAHA RIVER	Coverdale	GRANDE RONDE RIVER	Aneroid Lake No	Aneroid Lake No. 2 Beaver Reservoir	Moss Spring	Taylor Green
Fumber				Nev. 6	Nev. 9	Nev.	Ide. 13	Nev. I	£ \$	로 대 대 대	Nev. 1	Mev. 2			N8V. 1			155	1:35	136			145	142		166	154	161B	157		161		171		163	163A 168	166A	165



FINAL WATER SUPPLY OUTLOOK FOR OREGON

April 1, 1952

Oregon's 1952 water supply outlook, dependent on mountain snows, is "good" to "abundant" throughout the State, with forecasts of near record or record-breaking streamflows, accompanied by extremes of high water, to come from an all-time high of snow cover in many sections.

Stored water in reservoirs is 93 percent average with many reservoirs now spilling to make room for later heavy flows.

Mountain snow cover is above average on all measured snow courses and is greater than last year on all but 7 of the 111 measured courses. State-wide water content of the snow is 68 percent greater than average and 44 percent greater than last year; also 24 percent greater than in 1950. Snow-stored water now present above 5000 feet elevation is 61 percent greater than average and 42 percent greater than last year, while below 5000 feet it is 94 percent greater than average and 52 percent greater than last year.

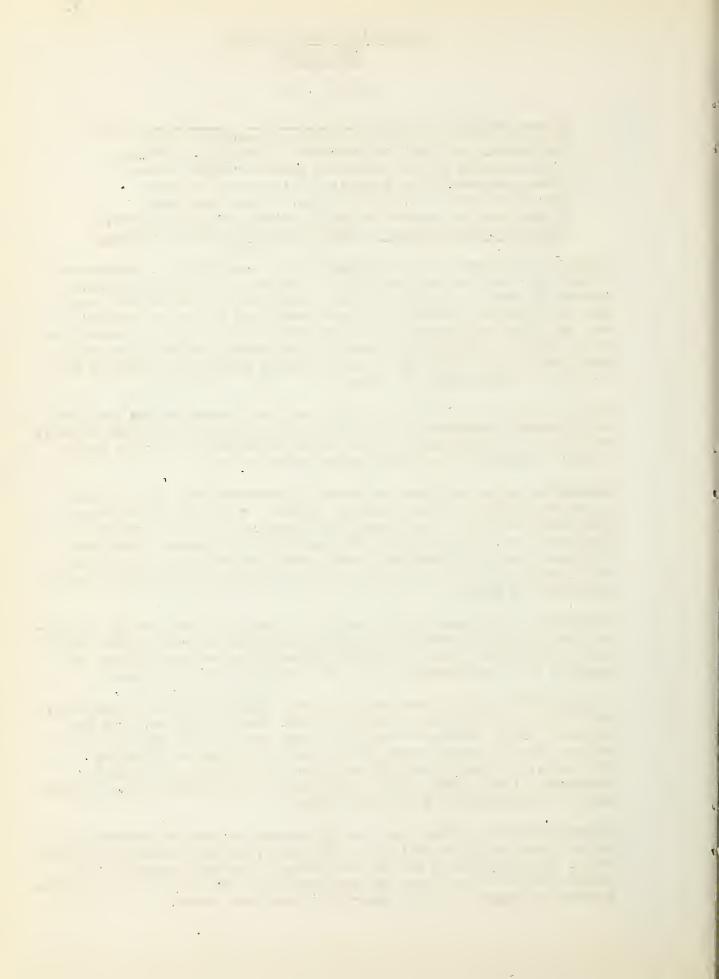
Except for the Umatilla-Walla Walla area, both watershed and crop land soils are well wetted--a factor that favors a sustained flow of streams. Soils in the southern half of the State are extremely wet, and agricultural activities have been delayed about 30 days.

Reservoired water supplies are generally excellent with half of the larger reservoirs spilling water to provide for inflow yet to come. Total water stored in the larger Oregon reservoirs is 17 percent less than last year, 4 percent less than in 1950 and 7 percent less than average. Many small privately owned reservoirs throughout the State are reported to be full or filling and will furnish satisfactory water supplies this year.

Streamflow is forecast at average to considerably above average throughout the State with heaviest streamflows expected to occur in the south half of the State and the lightest, but still above normal flows, to occur in the Umatilla-Walla Walla and Main Grande Ronde Basins.

All historically high flows should be very nearly equaled, or exceeded, on the following Basins: Owyhee, Malheur, Imnaha, Wallowa, John Day, Crooked, Ochoco, Deschutes and Little Deschutes, Middlo Fork and Coast Fork of the Willamette, North Umpqua, Rogue, Applegate, Illinois, Williamson, Sprague, Klamath Lake, Clear Lake, Gerber, Goose Lake, Chewaucan, Silver Lake, Warner Lakes, Guano Lake, Catlow Valley, Donner und Blitzen, Alvord Lake and Quinn River.

Exceptionally high flows have already occurred or can be expected soon on the above Basins as well as on the Burnt, Powder, Grande Ronde, Walla Walla, Umatilla, Willow and Silvies Basins. Excessive precipitation, together with abnormal snow melting conditions, would create even greater extremes of runoff from the abnormally heavy snow cover.



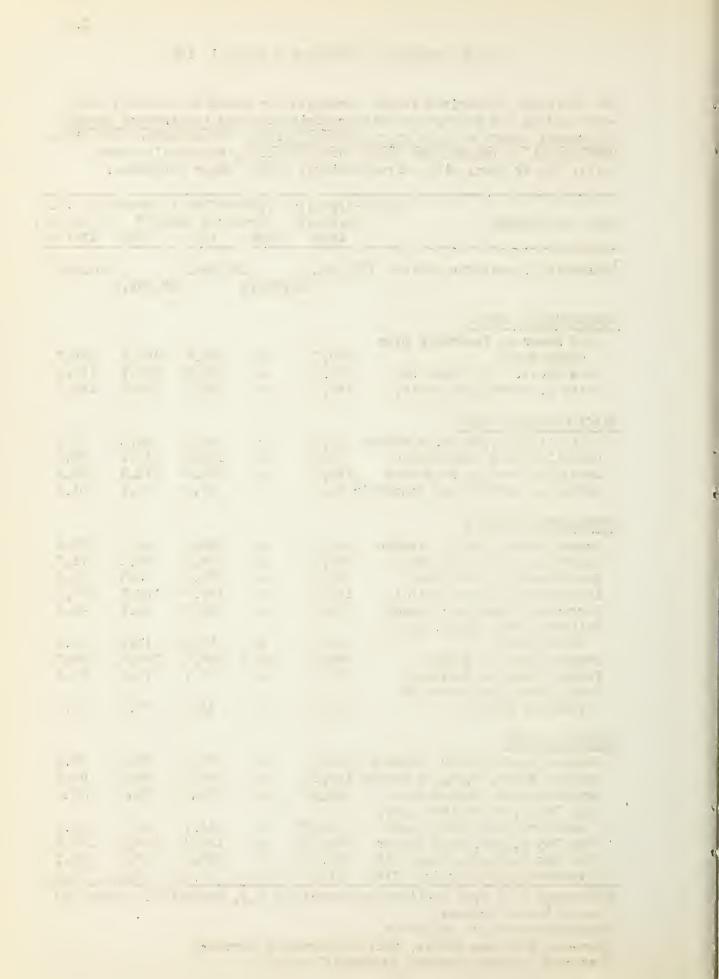
The following summarized runoff forecasts are based on mountain snow cover and on the assumption that precipitation and temperature during the runoff season will be approximately normal. Appreciable deviations from normal of temperature and/or precipitation, especially during April, May or June, will correspondingly modify these forecasts.

Apri BASIN AND STREAM	1-Sept., in Forecast	Meas	ured Ru	noff *	10-yr.Avg
	1952	1951	1950	1949	1941-50
Columbia R. near The Dalles I	18,000.0	11	7,528.0		104,815.0
	109	9,986.0	9	92,854.0)
NORTH CENTRAL OREGON					
Hood River at Powerdale plus					
Power Canal	360.0	a	497.6	483.1	318.8
Hood River, W.Fk. near Dee	175.0	a	228.6	225.1	155.3
White R. below Tygh Valley	185.0	а	233.1	265.6	155,0
UMATILLA-WALLA WALLA					
Walla "alla R., So. Fk, nr. Milto	n 75.0	a	88.3	84.8	72.2
Umatilla River near Gibbon	95.0	а	106.7	110.1	
Umatilla River at Pendleton	185.0	a	213.0	212.9	182.5
McKay Cr. above McKay Reservo	ir 30.0	а	39.9	22.7	31.9
NORTH EASTERN OR EGON					
Grande Ronde Ronr. La Grande	200.0	a	235.8	191.5	199.2
Catherine Greek near Union	75.0	а	67.1	73.0	71.8
Bear Creek near Wallowa	95.0	а	75.5		
Losting River near Lostine	158.0	а	137.7		•
Hurricane Greek near Joseph	56.0	а	42.8	48.6	46.2
Wallowa River, E. Fk. plus					
Power Plant	15.0	а	10.8	11.3	11.6
Imnaha River at Imnaha	440.0	267.5	287.7	254.0	303,0
Powder River at Salisbury	85.0	а	66.1	70.0	64.3
Burnt River near Hereford					
(Natural Flow)	63,0	а	49.7	47.0	43.6
EASTERN OREGON					
Malheur R., Mid. Fk. nr. Drewsey	125.0	a	63.3	68.5	75.9
Malheur River, N.Fk. at Beula		a	63.6	56.5	62.2
Owyhee R. above Owyhee Res.	780.0b	a	338.8	494.0	417.3
John Day R. at Prairie City,	, 55,		·	Ť	
combined with Power Canal	95.0 ^b	а	43.1	44.9	52.9
John Day R., Mid. Fk. at Ritter	230.0 ^b	a	125.8	123.2	127.4
John Day R., No. Fk. near Dale	440.0 ^b	a	267.7	288.2	261.1
Strawberry Cr.nr. Prairie City	11.0	a	7.1	8.3	8.4

^{*}Discharge data from preliminary records of U.S. Geological Survey and Oregon State Engineer.

aDischarge data not available

¹ Forecast by Boise Office, Soil Conservation Service.
b Forecast exceeds previous historical runoff.

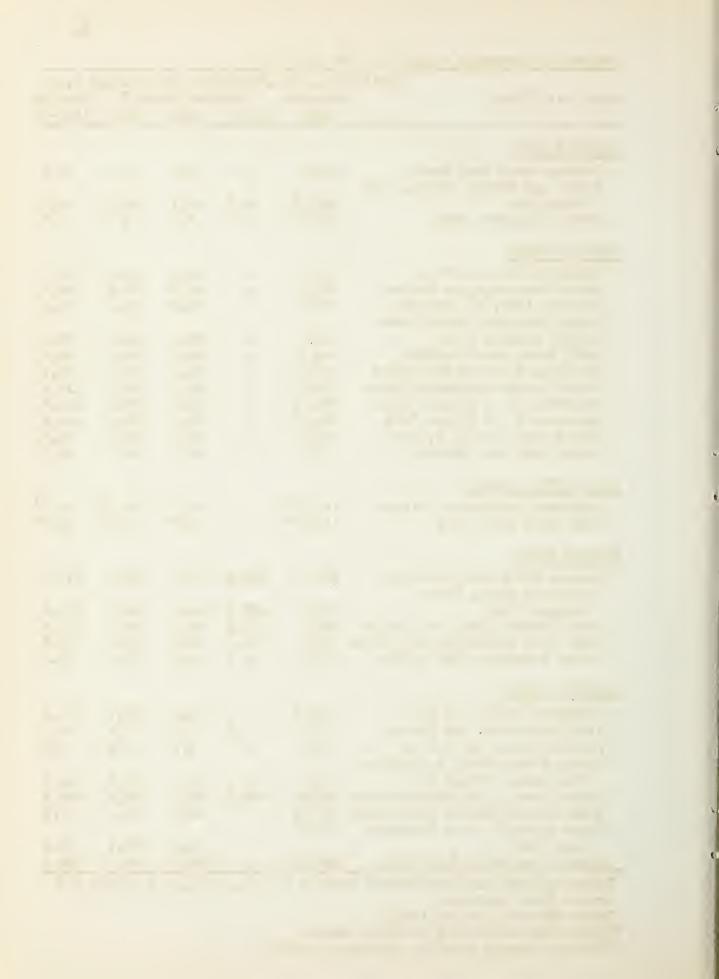


Streamflow Forecasts - April 1. 1952 (Cont'd)

	ept., inc.				
BASIN AND STREAM	Fore cast 1952	1951	ured Run 1950		10-yr.A
HARNEY BASIN					
Silvies River near Burns	150.0	a	83.8	79.1	97.7
Donner und Blitzen River, near	h				
Frenchglen	120.0b	58.7	57.1	-	
Trout Creek near Denio	20.0 ^b	a.	6.0	5.1	8.5
CENTRAL OREGON					
Crooked River near Post	210.0	a.	141.2	115.2	121.9
Ochoco Reservoir, Net Inflow	50.0	a	32.8	33.3	
Crescent Lake, Net Inflow Little Deschutes River, near	30.0	a	35.0	29.4	19.0
Lapine, Natural Flow	140.0	a	137.1	122.1	85.0
Odell Creek near Crescent	40.0	a	40.3	34.9	
Deschutes R. below Snow Creek	100.0b	a	79.4	76.2	57.9
Crane Prairie Reservoir Inflow	175.0 ^b	a	155.3	151.6	115.8
Deschutes R. at Pringle Falls	350.0 ^b	a	330.3	285.9	263.9
Deschutes R. at Benham Falls	635.0 ^b	a	632.0	555.8	
Tumalo Creek and C. S. Canal	58.0	a	60.4	58.1	48.0
Squaw Creek near Sisters	63.0	a	60.5	60.8	48.5
SOUTH CENTRAL OREGON					
Chewaucan River near Paisley	150.0db	a	67.2d	65. 0 ^c	
Deep Creek above Adel	125.0db	a	70.3d	71.40	63.9
KLAMATH BASIN					
Sprague River near Chiloquin Williamson River, below	500.0 ^b	282,2	207.3	183.9	219.1
Sprague River	750.0 ^b	457.6	354.4	320.6	361.5
Upper Klamath Lake, Net Inflow	925.0	611.0		396.7	462.9
Clear Lake Reservoir, Net Inflow	130.0	32.4	33.9	34.7	39.6
Gerber Reservoir, Net Inflow	81.0	12.3	14,5	20.2	18.1
SOUTHERN OREGON					
Applegate River near Ruch	300.0b	a.	140.2	118.4	114.8
Hyatt Reservoir, Net Inflow	9.0	3.8		7,6	5. 8
Fourmile Lake, Net Inflow	11.5	a	8.6	8.5	8.1
Little Butte Creek, N.Fk.below	Ψ.		•		
Fish Lake, Natural Flow	19.5	a'	17.9	18.9	14.3
Rogue River, N.Fk. above Prospect		345.5			
Rogue R., Mid. Fk. plus Power Canal	100.0b	a	82.5	91.1	73.6
Rogue R., So. Fk. near Prospect,	107.0 b			•	
plus Canal		а	91.8	105.1	74.6
Rogue River below South Fork	925.0b	a	808.8	790.8	656.9

^{*}Discharge data from preliminary records of U.S. Geological Survey and Oregon State Engineer.

aDischarge data not available.
dApril-June rather than April-September.
bForecast exceeds previous historical runoff.



Streamflow Forecasts - April 1, 1952 (Contid)

Soldwill Tot Oddos Thill The	302 (03110	4)			
April BASIN AND STREAM	-Sept., inc Forecast 1952		ea sur e dR	unoff*10	yr.Avg.
SOUTHERN OREGON (Cont'd)					
Rogue R. at Raygold nr. Central Point Rogue R. at Grants Pass Clearwater R. above Trap Cr. N.Umpqua R. below Lake Creek N.Umpqua R. at Toketee Falls	1215.0 1235.0 ^b 75.0 ^b 195.0 470.0 ^b	a a a a 445.3	71.1 189.0	1026.2 975.0 71.8 183.0 458.7	882.3 857.8 62.0 160.5 372.9
WILL METTE VALLEY Willamette R., Mid. Fk. at Eula McKenzie R. at McKenzie Bridge McKenzie River near Vida	1200.0 675.0 1465.0	a a a	1125.0 771.8 1725.2	1019.2 716.4 1516.7	824.4 562.5 1214.0
Clackamas River at Big Bottom Clackamas River near Cazadero	198.0 912.0	a a	235,4 1158.3	231.11 1159.0	_

^{*}Discharge data from preliminary records of U.S. Geological Survey and Oregon State Engineer.

aDischarge data not available.

bForecast exceeds previous historical runoff.

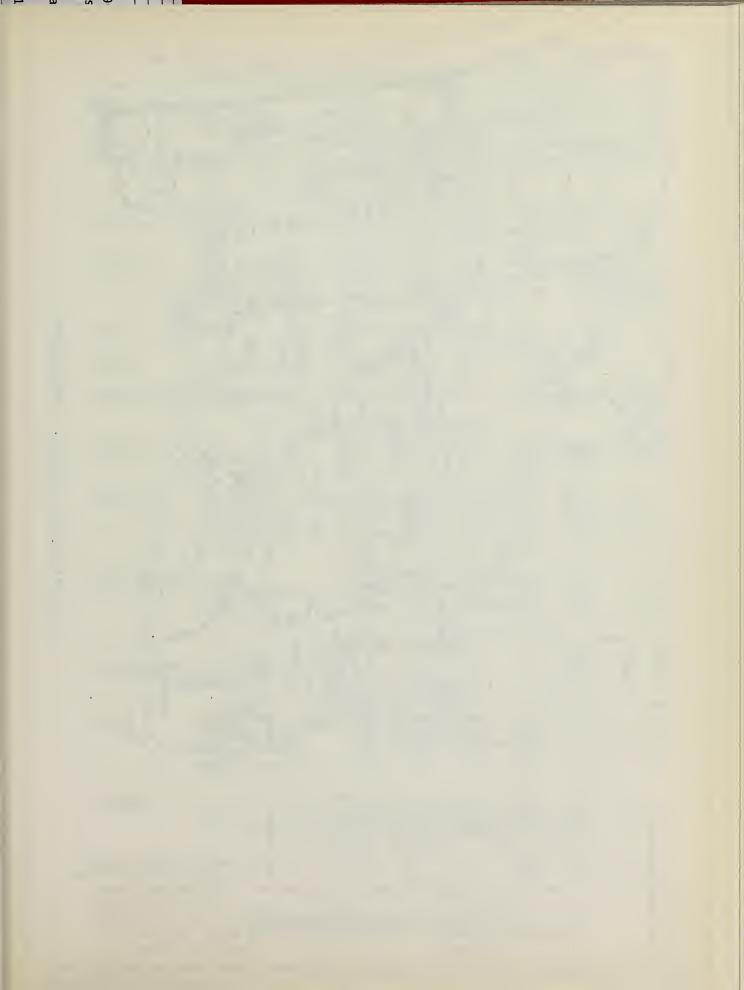


The following for ecasts are for the period April 1 through July 1 and will be of value both to irrigationists and hydro-power generating interests:

Apri: BASIN AND STREAM	l-July, ind Forecast	.,Streamflow in Thousand A.F. Measured Runoff* 10-yr.Avg							
DISTR AND STREAM	1952	1961			1941-50				
NORTHCENTRAL OREGON									
Hood River, W. Fk. near Dee Hood River at Powerdale plus	155.0	a	199.6	197.2	134,4				
Power Canal	305.0	a	428.2	413.4	270.4				
White R. below Tygh Valley	165.0	a	212.1	245.6	139.4				
UMATILLA-WALLA WALLA									
Walla Walla R., So. Fk. nr. Milton	63.0	а	72.5	70.4	59.4				
Umatilla River at Pendleton	178.0	a	208.0	208.5	177.5				
McKay Cr. above McKay Reservoir	29.5	a	39.8	22.6	31.6				
NORTHEASTERN OREGON									
Wallowa River, E. Fk. plus									
Power Plant	12.5	a	8.5	9.4	9.3				
Powder River at Salisbury	83.0	a	64.0	68.8	62.4				
EASTERN OREGON									
Owyhee R. above Owyhee Reservoi John Day River at Prairie City,	r 733.0	a	312.9	472.1	392.7				
combined with Power Canal	87.0	a	38.9	40.2	47.5				
CENTRAL OREGON				,					
Little Deschutes	125.0	а	121,3	106.8	75.4				
Deschutes at Pringle	190.0	a	179.0	162.8	158.6				
Deschutes at Benham Falls	420.0	a	416.6	366.2	322.4				
KLAMATH BASIN									
Williamson River bolow Sprague	R.825.0	391.4	292.8	257.9	296.8				
Upper Klamath Lake, Net Inflow		509.3	333.1	317.0	364.3				
SOUTH ERN OREGON									
Rogue River, N.Fk.above Prospec	t 390.0	282.3	522.2	324.1	255.0				
Rogue R., Mid. Fk. plus Power Cana	1 82.0	a		74.9					
Rogue R., So. Fk. plus Power Caral		a	79.8	-					
Rogue River below South Fork	784.0	а	662.0		-				
Rogue River at Raygold	1055.0	a	900.3	877.6	739.7				
WILL/METTE VALLEY									
Clackamas River at Big Bottom	162.0	а	196.1	195.6	132.5				

Discharge data from preliminary records of U.S. Geological Survey and Oregon State Engineer.





PACIFIC CEAN CURRY COL ON OREG UMPQUA ROGUE JACKSON W CLACKAMAS MARION 0 DESCHUTES 3220 DESCHUTES IMPORTANT 70 ONEN DESCHUTES ഗ N-823 I 3420 CROOKED INTERIOR OREGON COLC MHOL Z River RESERVOIRS DAY Z ●22RI UMATILL MALLA MALL 0 POWDER MALHEUR z GRANDE RONDE THEE PINE IMNAHA D Α Н Clear Lake Cold Springs 125 Ochaco Owyhee Fish Lake Faur Mile Lake Agency Valley RESERVOIR NAME Cattage Grave Clear Lake Unity Hyatt Proirie Emigrant Gap Drew Creek Darena Crescent Loke Crane Prairie Cottanwood Upper Klamath Lake McKay Gerber Fern Ridge Willow Creek No. 3 Warm Springs Wallowa Lake Thompson Valley Thief Valley Rock Creek SCALE IN MILES 1-27-45 1230 36R1 36R1 52R1 5220 3220 3220 3220 5223 8147 7247 7247 7237 8321 8321 2334 23420 1234 9411 1415 832 1415 832 1415 1 S.U.S.DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE ROBERT M. SALTER, Chief

STATIS OF	OREGON	RESERVOTE	STORAGE -	APRTI. 1.	1952

	STATUS OF OREGO	W VESEWA	OTK 210		THILL T	, 1952	
BASIN		USABLE CAPACIT				FEET IN	STORAGE ST
and	RESERVOIR	Thousand	d "	· • • • • • • • • • • • • • • • • • • •	****		lOYr.Avg
STREAM	$\Lambda\epsilon$	re Feet) 1952	1951	1950		1941-5
		ER COLU					
		wer Snal					
Owyhee	Antel ope	36.5	13.3	33.0	22.2	12.0	17.1
	Owyhee	715.0			529.8		566.0
Malheur	Warm Springs	191.0	97.9	82.6	45.8	64.2	121.7
Mariour	Agency Valley	60.0	40:15	32.8	34.6	53.6	50.5
	Willow Creek #3		12.0f	3.5	2.9	7.0	10.0f
	"		•				
Burnt	Unity	25,2	7.1g	14.7	6.3	13.0	14.2
Powder	Thief Valley	17.4	N.R.	17.4 ^f	11.0f	6.9 ^f	15.8 ^f
Grande Ronde	Wallowa Lake	40.9	11.4	17.9	11,9	17.8	20.6
	LO	VER COLU	MBIA DR	AINAGE			
Umat illa	McKay	74.0	44.6	64.3	65.7	58.4	61.0
	Cold Springs	50.0	50.0g	50.0	45.4	45.7	47.9
Deschutes	Ochoco	46.0	33.0g	43.2	18.0	31.2	27.0
	Crescent Lake	54.9	47.3	49.0	52.8	51.7	40.6
	Crane Prairie	55.3	47.1	54.6	47.1	37.6	37.1
	Wickiup	180.0	177.7	188.0	185.3	188.0	96.5d
Willamette	Dorena	70.5ª	35.6ª	35.2	36.1		
· · · · · · · · · · · · · · · · · · ·	Cottage Grove	30.1a				19,5	18.0d
	Fern Ridge	94. 28			-	_	54.8°
		INTERIO	R DRAIN	AGE		,	
Silver Lake	Thomp son Valley	17,4	N.R.	N.R.	5.2	N.R.	7.4f
	Ţ	WEST COA	ST DRAI	MGE			
Rogue	Fish Lake	7.8	5.7	6.1	4.9	5, 1	4.7
Marie and	Fourmile Lakeb	16.1	6.3	12.6	7.8	7.7	6.1
	Emigrant Gap	8.3	8.3	8.2	8.4	8.4	7.8
	Hyatt Prairieb	16.1	6.3 8.3 4.6	6.7	4.7	8.1	6.0
Klamath	Upper Klamath L	k 584.0°	382.6	500.9	478.5	438,6	425.1
	Gerber	94.0	26.2	57.6	42.0	32,8	44.8
	Clear Lake	440.2	156.8	139.3	149.3	172.3	
Goose Lake	Cottonwood	4.1	h	2.9	3.0	0,0	1.1
	Drow	62.5	45.2		54.3		46.6
N.R No Rep	owt			d1943-5			

d1943-50.

e1942-50.
fPartly estimated.
Spilling.
hNot full; spilling.

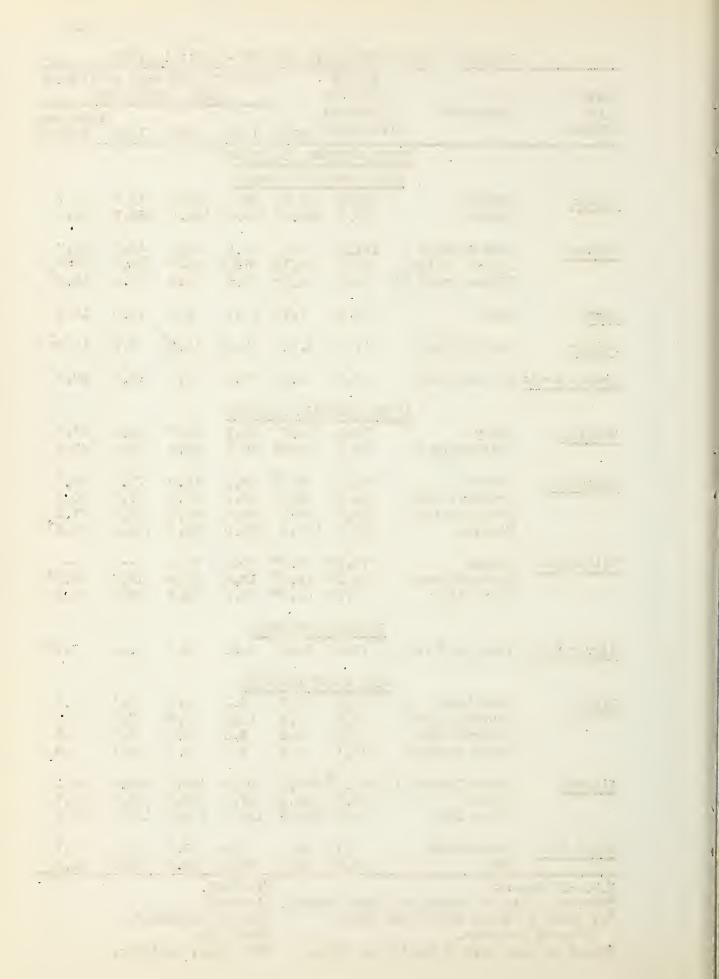
N.R.--No Report.

aStorage space reserved for flood control.

bBy ditch to Rogue River side from

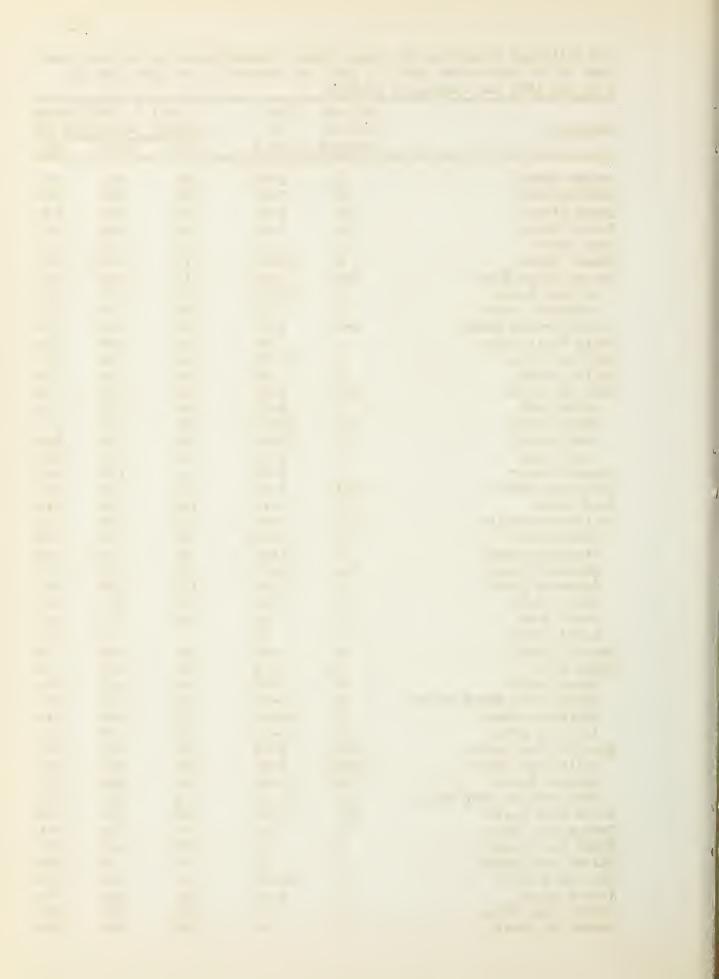
Klamath Drainage.

OBased on gage zero elevation of 4135.0.



The following tabulation of Oregon stream basins presents the water content of the snow about April 1, 1952, as percent of the same date in 1951 and 1950 and average of record:

DRAINAGE	No. of Courses	Yrs. of		1, 1952 as perc	
	Averaged	Record	1951	1950	Avg.
Owyhee River	14	3-24	201	211	219
Malhour River	6	7-2 2	158	132	184
Burnt River	4-5	7-17	143	115	156
Powder River	7-8	4-16	121	109	132
Pine Creek	1	14	147	149	158
Imnaha River	2	10-18	112	107	1 27
Grande Ronde River	9-10	5-23	115	103	123
Wallowa River	2	TO-18	112	107	127
Catherine Creek	2	14	132	117	127
Main Grande Ronde	5-6	5-23	112	94	120
Walla Walla River	1	21	124	109	130
Umatilla River	5	13-23	113	92	122
Willow Creek	1	23	112	90	138
John Day River	13-14	5-23	126	110	143
North Fork	6	5-23	114	99	130
Middle Fork	3-4	16-17	133	120	144
Main Branch	4	15-22	139	119	154
South Fork	2	8-16	135	134	163
Crooked River	4	8-23	141	126	165
Deschutes River	13-14	2-23	120	108	156
Hood River	3	4-19	121	88	116
Willamette Valley	12-14	8-22	118	96	159
Sandy River	3	15-20	96	82	126
Clackamas River	3	11-20	91	70	126
Santiam Rivers	3-4	8-14	121	95	167
McKenzie River	3	11-14	119	98	153
Middle Fork	4-5	8-22	1 43	115	184
Coast Fork	1	13	199	126	225
Mary's River	1	11			247
Umpqua River	6	4-23	146	122	175
Rogue River	14	4-22	188	141	192
Upper Rogue	5	8-19	142	131	168
Bear-Little Butte Creek	6	4-22	261	142	204
Applegate River	3	10-17	227	156	212
Illinois River	2	15-16	368	168	2 40
Klamath Lake Basin	16-18	1-25	172	160	202
Williamson River	11-12	8-24	153	161	191
Sprague River	7-9	11-24	267	202	281
Gerber-Clear Lake Basin	2-4	1-21	31 4	187	315
Goose Lake Basin	3-4	11-21	235	183	260
Warner Lake Basin	1	13	174	175	221
Guano Lake Basin	1	12	800	452	371
Silver Lake Basin	1	11	pm mm		1150
Chewaucan River	3	13-21	211	183	246
Harney Basin	9:	8-21	151	152	194
Alvord Lake Basin	1	3	332	503	335
McDermitt Creek	1	3	332	503	33 8



IRRIGATION WATER SUPPLY FOR ECASTS

SEASON OF 1952

- Foreword -

Measurements of snow depth and water content were secured on all Oregon snow courses as near April 1 as possible. Watershed soil moisture determinations usually made at 12 scattered stations during mid-March were again not obtained this year due to continued shortage of funds and personnel.

Local Water Forecast Committee Meetings were held this year in eight important irrigated regions of the State during the period March 29 through April 7 as follows: Hood River for Northcentral Oregon; Redmond for Central Oregon; Burns for John Day-Harney Basin; Pendleton for Umatilla-Walla Walla Basin; Enterprise for Northeastern Oregon; Ontario for Southeastern Oregon; Lakeview for Southcentral Oregon; and Grants Pass for Southern Oregon. Most of the 38 cooperating agencies were represented at these discussions. Each Committee's report outlining the irrigation water prospect for 1952 in its respective area is summarized below. Modifications of these forecasts may be required later in accordance with deviations of precipitation and temperature from normal during the runoff season.

- Forecasts -

Northcentral Oregon

Satisfactory water supplies for irrigation in Hood River and Wasco Counties in 1952 appear to be guaranteed from the present mountain snow cover which is 120 to 155 percent of average and slightly heavier than last year. Water regulation which usually cuts off holders of late water rights is expected this year only on the smaller streams, and there only in a few instances.

Hood River Valley lands will have adequate water supplies this year with the West Fork of Hood River forecast to discharge 175,000 a.f. during April-September. This flow will be considerably less than 228,000 a.f. received in 1950, but it will equal about 113 percent of the ten year average of 155,300 a.f. The first four months, April through July, should bring 155,000 a.f. of the total forecast.

Flow of Middle and East Forks of Hood River is not gaged, but from a relationship to the flow of the West Fork established through earlier records, it is forecast that Middle Fork and East Fork will have satisfactory supplies for this irrigation season.

Discharge of Hood River at Powerdale plus the Power Canal will be about 360,000 a.f. for April-September. This will be considerably less than the 1950 discharge of 497,000 a.f., but it will be 113 percent of average. April-July flow will be about 305,000 a.f.

Lands on the west side of Hood River Valley served from the Mount Defiance-Greenpoint source should have fairly good water supplies again this year. Water stored in the snow is not equal to the 1950 total by any



means, but it is better than in 1951 and with careful use should provide a satisfactory supply. Soils in Hood River Valley orchards are well wetted compared to average and should not require early intensive irrigation.

Snow cover on Wasco County watersheds is slightly better than last year and up to 155 percent of the long-time average. At Brooks Meadows the snow contains 17.2 inches of water compared with 15.4 inches in 1951 and with 11.1 inches which is the average for 19 years.

Fifteenmile and Mill Creeks should provide good water supplies with stream regulation expected only on Mill Creek, and that toward the very end of the season.

White River at Tygh Valley is forecast to discharge 185,000 a.f. for April-September. This flow would be 119 percent of the ten year average of 155,000 a.f. About 165,000 a.f. of the above flow will come in the April-July period.

Clear Creek and Frog Creek should provide adequate supplies of irrigation this year to the Juniper Flat area. Snow cover on the Clear Lake Snow Course is slightly less than that of a year ago but seems adequate for this year's water supply.

Reservoirs on Rock and Badger Creeks should fill easily again this year, as usual. Water supplies from other small tributaries of White River should be fairly well sustained this year.

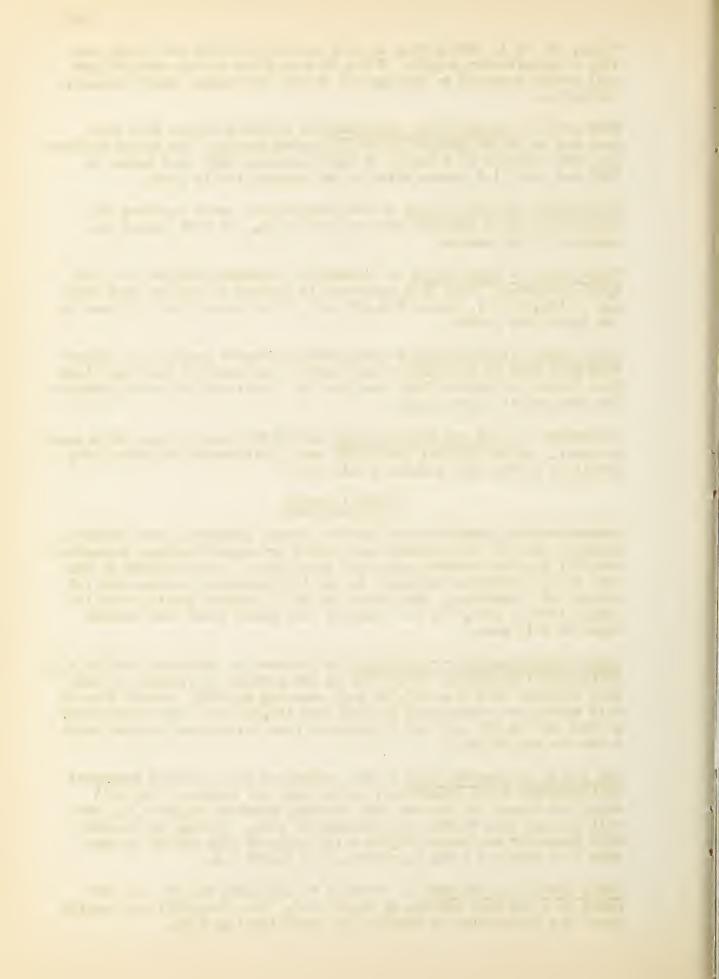
Central Oregon

Record breaking mountain snow cover in Crook, Deschutes, and Jefferson Counties in 1952 will produce near record or record breaking streamflow and will provide abundant water for irrigation. Water content of the snow on the Deschutes watershed is now 155 percent of average and 118 percent of a year ago. Snow cover now is 10 percent greater than in either 1949 or 1950, the two heaviest snow years since snow surveys began in this area.

Little Deschutes River near Lapine is forecast to discharge 140,000 a.f. during April-September. This will be 165 percent of average and only very slightly more than 137,000 a.f. measured in 1950. Record flow of this stream was established in 1943 when 145,000 a.f. were discharged. A total of 125,000 a.f. may be expected from this stream between April 1 and the end of July.

Net inflow to Crescent Lake on the headwaters of the Little Deschutes will probably equal 30,000 a.f. in the next six months. This will equal 158 percent of the ten year average, which is 19,000 a.f., but will be less than 35,000 a.f. measured in 1950. Storage in Crescent Lake Reservoir now totals 51,000 a.f., compared with 49,000 at this date last year and a ten year average of 40,600 a.f.

Odell Creek near Crescent is forecast to discharge 40,000 a.f. compared to a ten year average of 29,000 a.f. This flow will very nearly equal the record flow of 40,300 a.f. established in 1950.



Flow of the Deschutes River below Snow Creek is forecast at 100,000 a.f. or 173 percent of the ten year average of 57,900 a.f. This flow will exceed the previous high of 85,000 a.f. measured in 1943.

Inflow to Crane Prairie Reservoir is forecast for the next six months at 175,000 a.f., compared to 115,800 average for the past ten years. Previous record flow was 155,300 a.f. in 1950. Total storage in Crane Prairie Reservoir, as of this date, is 47,000 a.f., compared with 54,600 a.f. last year and a ten year average of 37,100 a.f. The Reservoir will, of course, easily fill.

Wickiup Reservoir now stores 178,000 a.f. of irrigation water, compared with 188,000 a.f. in 1951. The average April first storage in Wickiup is 96,500 a.f. Storage in this Reservoir will again be lowered to a low gage height to permit further construction on the Reservoir this coming fall. An adequate supply of water is available for the north unit this year.

The Deschutes River at Pringle Falls will discharge 350,000 a.f. in the next six months, compared with 330,300 in the same period of 1950. The ten year average flow is 263,900 a.f. for April-September.

Total flow of Deschutes River at Benham Falls for the next six months is forecast at 635,000 a.f., or 133 percent of 480,000 a.f. which is the ten year average. 1950 flow for the same period was 632,000 a.f.

These 1952 flows on the Deschutes River will equal or exceed all measurements which have been taken since early in the 1900's.

Davis Lake above Wickiup Reservoir has been higher in its stage each year for the past several years, until last year the guard station had to be moved. The road around the northwest side of the Lake has had to be abandoned. The historical record indicates that peak stage on this Lake is 21 feet. Indications are that the Lake is at a stage of 17 feet now and in 1952 possibly will surpass the 21 feet of historical record.

Tumalo Creek and the Columbia Southern Canal are forecast to discharge approximately 58,000 a.f. during the April-September period. The flow in 1950 was 60,400 a.f. and the ten year average flow was 48,000 a.f. This will, of course, furnish an adequate supply.

Squaw Creek near Sisters is forecast to flow 63,000 a.f., compared to 60,500 a.f. in 1950 and 60,800 a.f. in 1949. The ten year average flow is 48,500 a.f. Excellent supplies of water are therefore assured; even the Plainview Ditch should have water until well into July.

Snow cover on Crooked River watershed this year is extremely heavy, and in spite of the recent melting and flooding, is now 165 percent of average and 125 percent of that of 1949, the heaviest snow year previous. Much snow still is found down to the 4500 foot level, although normally this is melted back during the early March freshets.

Flow of the Crooked River near Post is forecast at 210,000 a.f. for April-September. This flow will be 172 percent of the 121,900 a.f. ton year average. The 1950 flow of 141,200 a.f. established a new



record in the short history of this station. Consequently, the flow forecast for this year will produce a new record.

Inflow into Ochoco Reservoir has been by-passed at the rate of approximately 500 second feet during most of the month of March. Present storage is 33,200 a.f., and the Reservoir, of course, will fill to capacity. For cast for the net inflow to Ochoco Reservoir this year is 50,000 a.f., compared with 32,800 in 1950 and 29,900 as the ton year average. The inflow in 1948 was approximately 72,000 a.f.

Extremely high flows of water in Creeked River experienced the last week in March can be exceeded if present snow cover is rapidly released by excess precipitation or high temperatures. Close examination of the snow cover on the watershed indicates that the March flood of 1952 removed only small portions of the lower elevation snow. Much remains above 4500 feet, but especially on the north slopes. The record breaking snow cover at Ocheco Meadows contains 17.5 inches of water at this date, compared to a 23 year average of 9.3 inches.

Harncy Basin

Abundant water supplies are indicated for irrigated lands in Harney Basin this season. Snow cover on more than half of the snow courses breaks all previous records. Water content of the snew as of this date is 48 percent greater than in 1951 and 91 percent greater than average. Soil meisture conditions are reported as excellent in the lower end of the Valley, especially in the Denner und Blitzen Drainage, but are about normal in the upper end of the Valley in Silver Creek and Silvies Drainages.

Donner und Blitzen is forecast to discharge 120,000 a.f. for April-September. This flow will be 185 percent of the ten year average. Flow in 1951 for April-September was 58,700 a.f. Water will be bypassed immediately in this Drainage to propare for the record flow yet to come.

Trout Creek near Donio, with its headwaters in the Trout Creek Mountains, is forecast to flow 20,000 a.f., a new record for the April-September period. The previous ten years show an average flow of 8,500 a.f. Disaster Peak Snow Course in the Trout Creek Mountains at elevation 6500 feet had a water content of 46.7 inches on March 1 this year, compared to the usual water content of about 9 or 10 inches.

Streamflow in Catlow Valley and in Reck Creek out of the Hart Mountain Refuge is expected to be abundant this year.

Streamflew in Tenmile Creek and Oregon Creek above McDermitt is expected to be above all previous records.

In the northern end of Harney Basin, the flow of Silvies River near Burns is forecast at 150,000 a.f., compared to a ten year average of 97,700 a.f. This will provide an adequate supply for all irrigation purposes but will not establish a new record of streamflow. Some flooding of this stream near Burns occurred during the last week of March, but even higher water can be experienced later this spring if unusual conditions of melting should occur.



Silver Crook, west of Silvie's River and sharing portions of the head-waters with it and with Crooked River and the South Fork of John Day, is expected likewise to be better than last year to a considerable degree. The Snew Mountain Course new has a water content of 20.4 inches, compared to 16.2 inches last year and an eight year average of 14.3 inches.

John Day Basin

Water content of mountain snow cover on the John Day watershed in many instances has broken all provious records. Water content new averages 140 percent of 1951 and 167 percent of the long time average. The last week of March brought heavy runoff in most tributaries to this stream, and considerable flood damage was experienced in some areas, notably on the Main John Day.

Flow of the Main John Day River at Prairie City combined with the Power Canal is forecast to be 95,000 a.f. in the next six menths, compared to 52,900 a.f. which is the ten year average. Only the very low lying snow was melted and ran out during the recent flood runoff, with the result that very high potential runoff still remains in the watershed of this Drainage. The 1952 streamflow is forecast to set a new record.

Strawborry Crock, a small tributary of the Main John Day near Prairie City, is forecast to discharge 11,000 a.f. in the next six menths. The ten year average is 8,400 a.f.

Middlo Fork of the John Day River as measured near Ritter is forecast to discharge 230,000 a.f., which will be a new record for the stream. The ten year average discharge is 127,400 a.f. This forecast is therefore 180 percent of average.

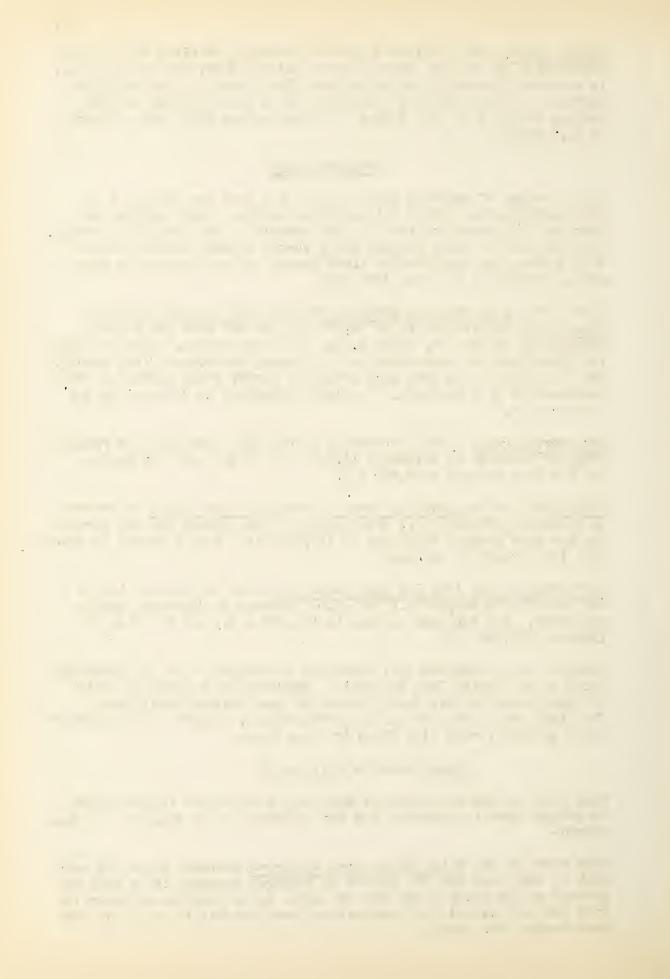
North Fork of the John Day River near Dale also is expected to set a new record with 440,000 a.f. of water forecast to discharge April-September. The ten year average is 261,100 a.f., and the flow in 1950 was 267,700 a.f.

Abundant water supplies will therefore be available for all irrigation needs in the entire John Day Basin. Extremely high flows can still be experienced in this Basin, dependent upon melting conditions. The right combination of excess precipitation, Chinock and temperature would produce record high flows in these areas.

Umatilla-Walla Walla Basin

Snow cover on the watersheds of this region this year is sufficient to provide good to adequate, but not abundant, water supplies for this season.

Snow cover on the Walla Walla River Watershed contains water 124 percent of last year and 130 percent of average; however, it is only 80 percent of the heavy water year of 1949. Soils immediately under the snow are well wetted, but penetration from last fall's rains has not been deeper than usual.



The South Fork of Walla Walla River near Milton is forecast to discharge 75,000 a.f. during April-September, as compared with the ten year average of 72,200 a.f. 1950 streamflow for this period was 88,300 a.f. A total of 63,000 a.f. will come this year in the April-July period. Adequate water supplies should be available for lands served by this stream, except possibilities of some very late season deficiencies for late water rights on the Hudson Bay and Pleasant View Canals. These deficiencies, of course, can easily be alleviated by good summer rains.

Water content of the snow cover on the <u>Umatilla Watershed</u> is 113 percent of 1951, 92 percent of 1950, and 122 percent of average. Snow water in the heavy snow year of 1949 was 24 percent greater than this year. Soils appear to be well wetted under the snow pack but not to great depths. In fact, a deficiency seems to exist in the lower few feet of soil. Water content of crop land soils fallowed last year appears to be somewhat below average.

Flow of the Umatilla River near Gibbon above Meacham Creek for 1952 is forecast at 95,000 a.f., compared with 92,900 for the ten year average, and 106,700 a.f. in 1950. 1949 brought the heaviest recent flow with 110,100 a.f.

Discharge of the Umatilla River at Pendleton will probably be 185,000 a.f. April-September, compared with 182,500 a.f. for the ten year average. The 1950 discharge was just slightly more than that of 1949 and measured 213,000 a.f. This year's discharge will bring 178,000 a.f. in the first four months, April-July. Adequate water supplies seem assured for lands served from this source.

Cold Springs Reservoir is now full and spilling with 50,000 a.f. in storage. Ample water is, therefore, available for lands served from this source. Delivery of water in the Hermiston area has not begun as yet.

The flow of McKay Creek above McKay Reservoir for April-September is forecast this year at 30,000 a.f., compared with 31,900 a.f. for the ten year average. 1950 brought 39,900 a.f. Almost all, 29,500 a.f., will come in the first four months, April-July. A heavier than usual accumulation of snow on the head of this watershed this year, as indicated at Lucky Strike, seems to guarantee more inflow than would be indicated by the snow measurement at Meacham. Adequate water supplies for all lands served from this source are assured.

McKay Reservoir now contains 44,600 a.f., compared to a ten year normal average accumulation of 61,000 a.f. In 1951 the storage was 64,300 a.f. Chances of filling the Reservoir this year are good, but by no means sure. However, adequate water should be available for all lands served by this source.

Birch Creek Watershed has a good snow pack as measured at Lucky Strike with 13.6 inches of moisture compared to a 13 year average of 13.1 inches. Runoff should be satisfactory, but there will, of course, be some late season shortages.

On Butter Creek and Willow Creek Watersheds the snow pack is about 138 percent of normal. Arbucklo Mountain Snow Course now has 14.4 inches of water, compared to a 23 year average of 10.4 inches. Water supplies in this area should be somewhat better than last year.

Runoff from low snow throughout both the Umatilla and Walla Walla areas has been completed, and most streams have shown high stages of flow for a few days during the later part of March. Snow measurements used in the above forecasts indicate much water still remaining to come.

Northeastern Oregon

Ample water supplies in 1952 seem assured for Wallowa, Union and Baker Counties, judging by the water content of mountain snow cover which ranges from 120 to 156 percent of average.

Snow cover in the Wallowa Watersheds as measured at Ancroid Lake is now 127 percent of average and 112 percent of last year.

Flow of the Wallowa River, East Fork plus the Power Plant is forecast this year at 15,000 a.f. for April-September, compared with 11,600 a.f. for the ten year average. A flow of 10,800 was received in 1950 and 11,300 a.f. in 1949. A total of 12,500 a.f. should come in April-July of this irrigation soason.

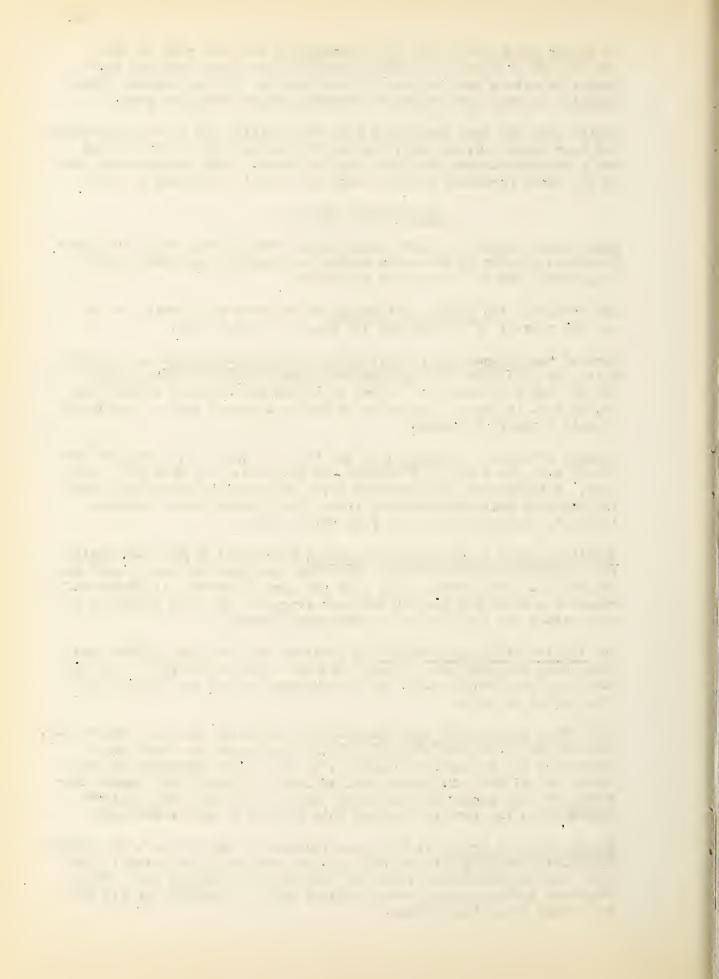
Storage of water in Wallowa lake now totals 11,300 a.f., compared with 20,600 a.f. for a ten year average and 17,900 a.f. at this date last year. Although present Roservoir level is quito low, there is a possibility that this reservoir may fill. Satisfactory water supplies should be available this year from this source.

Hurricane Crook as measured near Joseph discharged 42,800 a.f. during the irrigation season of 1950. The 1949 discharge for this period was 48,600 a.f. The forecast this year for April-September is 56,000 a.f., compared with 46,200 for the ten year average. The 1948 discharge of this stream was 59,400 a.f. for this same period.

The Lostine River near Lostine is expected to discharge 158,000 a.f. this year, compared with 127,800 a.f. as a ten year average. The 1950 discharge was 137,700 a.f., and the previous record was 183,700 a.f. established in 1913.

Bear Croek as measured near Wallowa will discharge this year 95,000 a.f. compared to a ten year average of 73,200 a.f., and the discharge of 1950 which was measured at 75,500 a.f. The record discharge of this stream was 97,310 a.f. established in 1943. Although late summer discharge of this stream usually tapers off earlier than other Wallowa tributaries, the flow is expected this year to be well sustained.

Imnaha River at Imnaha is this year forecast at 440,000 a.f. for April-September, compared with 303,000 a.f. for the ten year average. The 1951 flow was 267,500 a.f. and the 1948 flow was 451,230 a.f. These forecasts indicate ample water supplies will be available in all Wallowa County areas this season.



Water content of the snow on the Main Grande Ronde Drainage is this year 120 percent of average and 112 percent of last year's figures.

Although the Grande Ronde River near La Grande has already experienced a very heavy flood flow, discharge for April-September period this year is forecast at 200,000 a.f., compared to the ten year average of 199,200 a.f. The 1950 discharge was 235,800 a.f. This flow should be satisfactory for all usual irrigation needs.

The Catherine Creek Watershed has a snow cover 127 percent of average and 132 percent of last year. No such heavy runoff has occurred on this stream as has been experienced on the Grande Ronde.

Discharge of Catherine Creek near Union is forecast this year for April-September to be 75,000 a.f., compared with 71,800 a.f. as the ten year average and 67,100 a.f. in 1950. A slightly heavier snow cover on this watershed this year, compared to last year, assures a satisfactory water supply for water users served from this source.

Eagle and Pine Creeks should have a considerably greater than normal discharge this year. Water content of the snow at Taylor Green has jumped from 17.1 inches a year ago to 24.4 inches this year. At Schneider Meadows the 14 year average of water content is 28.8 inches, whereas on March 1 this year the water content was 44.4 inches and 45.4 inches on April 1. The lack of continuous streamflow records prevents making volumetric forecasts for these two streams, although ample water supplies should be available this year.

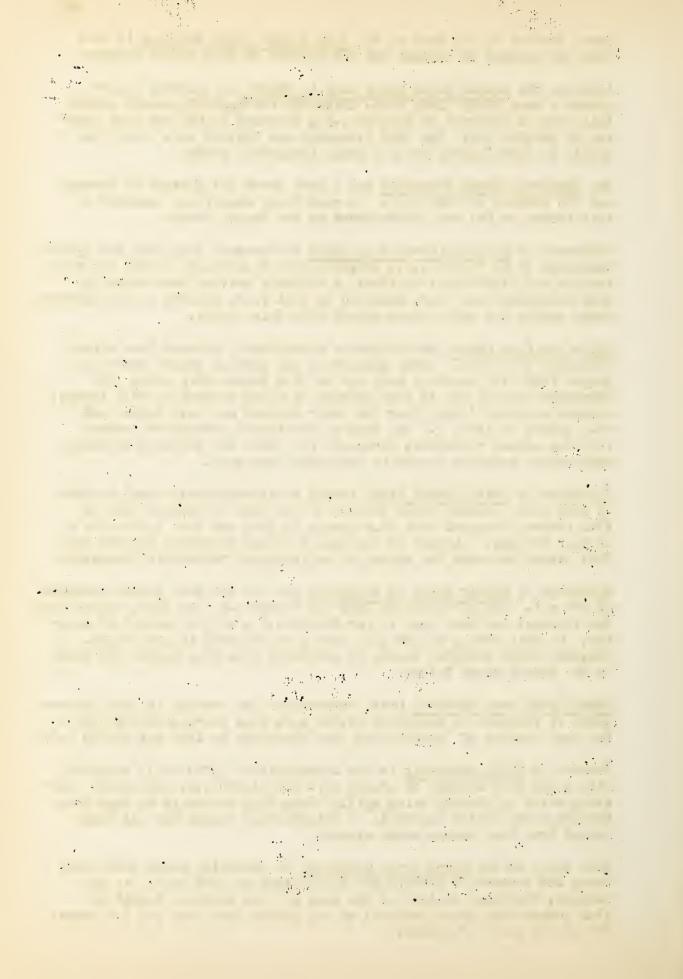
Discharge of North Powder River should be approximately equal to that of 1950 since present water content of the snow at Anthony lake is 31.5 inches, compared with 32.6 inches in 1950 and 27.5 inches for a 16 year average. Absence of continuous stream discharge records for this stream prevents the making of satisfactory volumetric forecasts.

Discharge of Powder River at Salisbury for the ten year period averages 64,300 a.f. The discharge in 1949 was 70,000 a.f. and 1950, 66,100 a.f. The forecast for this year is for 85,000 a.f., or 132 percent of average. Of this total, 83,000 a.f. should be received in April-July. Adequate water supplies should be available from this source for lands in the Powder River Valley.

Burnt River near Hereford (with corrections for storage in Unity Reservoir) is forecast to discharge 63,000 a.f. this year, compared with a ten year average of 43,600 a.f. The discharge in 1950 was 49,700 a.f.

Storage in Unity Reservoir is now approximately 5,000 a.f., compared with a ten year average of 14,200 a.f. and 14,700 a.f. last year. However, water is already being spilled from this Reservoir to make room for the heavy inflow expected. A satisfactory supply for all lands served from this source seems assured.

Snow cover on the Burnt River Watershed is unusually heavy this year, being 156 percent of average and 143 percent of last year. As an example, the water content of the snow at Blue Mountain Summit is 13.2 inches this year, compared to 9.2 inches last year and 7.3 inches for the 17 years of record.



Southeastern Oregon

Abundant water supplies in 1952 are in sight for all irrigated lands in Malheur County. The mountain snow pack which has been above normal most of the winter has already released water from the very lowest elevations, bringing flood flows which have very nearly equaled previous records. Crop land soils seem to be satisfactorily wet this year, and farmers have not as yet asked for water. Only the very lightest soils seem to have any possible shortage, and that only in the top few inches.

Water content of the snow on the Malheur Watershed is 158 percent of last year, 132 percent of 1950 and 185 percent of average.

Flow of the Malheur River, Middle Fork as measured near Drewsey should be 125,000 a.f. for the April-September period this year, compared with 75,900 a.f. for the ten year average and approximately 55,000 a.f. last year. This heavy discharge will be received in spite of the fact that a very heavy discharge, caused by the melting of low elevation snow in this watershed, has already been received.

Warmsprings Reservoir has a total of 97,900 a.f. in storage, compared to 82,600 a.f. a year ago. The ten year average for storage here is 121,700 a.f. There seems no question but that this Reservoir will be filled this year.

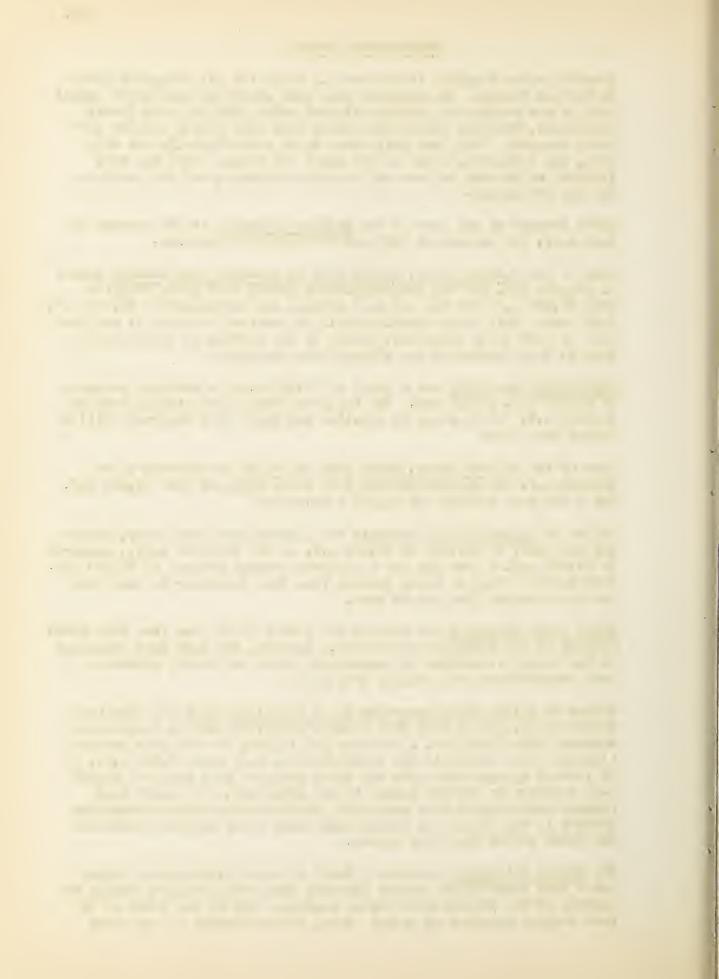
Flow of the Malheur River, North Fork at Beulah is expected to be 100,000 a.f. for April-September this year, compared with 62,200 a.f. for a ten year average and 47,300 a year ago.

Inflow to Agency Valley Reservoir has already been very heavy, bringing the total in storage to 40,100 a.f. on the first of April, compared to 32,800 a.f. a year ago and a ten year average storage of 50,500 a.f. Considerable water is being spilled from this Reservoir to make room for the abundant flow yet to come.

Bully Creek Watershed has already had a very heavy flow from late March melting of low elevation snow cover. However, the snow crop remaining on the higher elevations is excessively heavy and should produce a very satisfactory water supply this year.

Inflow to Willow Creek Reservoir No. 3 on Willow Creek has also been satisfactory, and at this date a total of 12,000 a.f. is in storage, compared with 3,500 a.f. a year ago and 10,000, the ten year average. Although this Reservoir was constructed to hold some 60,000 a.f., it is limited by agreement with the State Engineer to a total of 21,000 a.f. capacity to prevent damage to the structure. The heavy snow storage remaining on this watershed, together with water already impounded in the Reservoir, should make ample water supplies available for lands served from this source.

The Owyhee Watershed, covering a total of some 11,160 square miles, has a snow cover which exceeds anything previously measured during the history of the present snow survey program. Out of the total of 12 snow courses reported as of this date, 10 have broken all previous



records. Water content of the snow, as of this date, is 201 percent of last year and 219 percent of the period of record.

Snow surveys in Upper Paradise Valloy have been delayed due to temporary avalanche danger. These measurements will be obtained at a later date.

The Owyhee Project has an abundant water supply on hand for this season and an excellent start for the next year with the huge Reservoir now storing 539,200 a.f., compared to a ten year average of 566,000 a.f. Last year at this time the Reservoir was full. However, heavy spilling was begun on March 18 this year to make room for the abundant flow yet to come.

The discharge of the Owyhee River above Owyhee Roservoir is expected to be 760,000 a.f. in the next six months, compared with 417,300 a.f., which is the ten year average. Approximately 316,000 a.f. were received in this six menths; period last year.

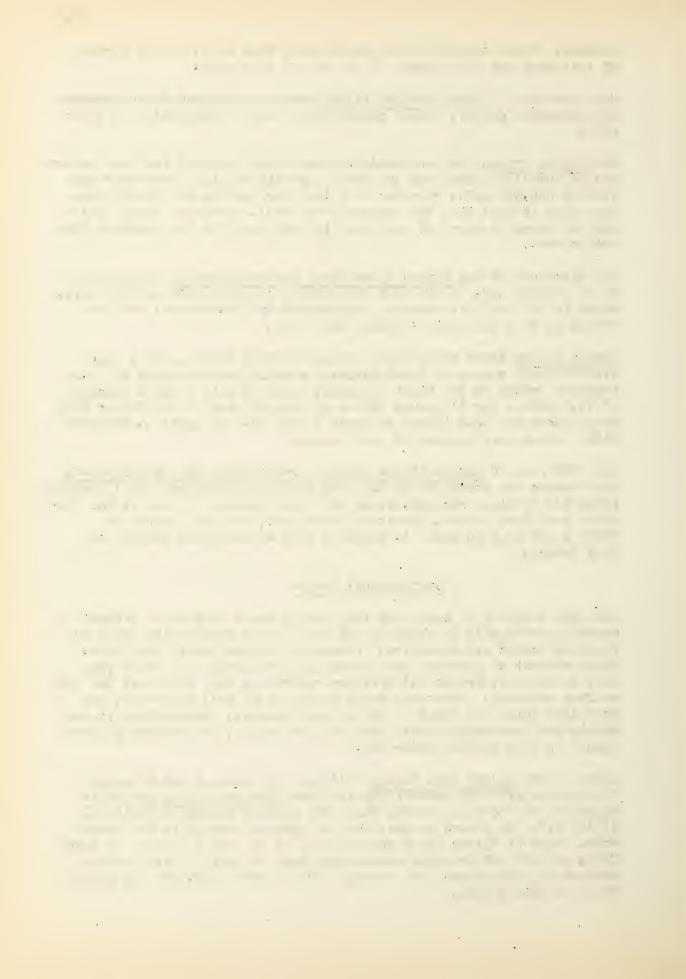
Jordan Valley lands should have excellent water supplies this year with the snow course at South Mountain showing water content of 23.8 inches of water on the first of March, compared with a total average of 11.6 inches for 11 years. Water content of snow at the Silver City Snow Courso was 25.7 inches on March 1, and 31.5 on April 1, compared with a seven year average of 12.7 inches.

The 1952 flow of McDermitt and Tenmile Creeks into Upper Quinn River, just across the border in Nevada from Southeastern Oregon, will possibly break all previous records, since the water content of snow at the Disaster Peak Snow Course, elevation 6,500 feet, was 46.7 inches on March 1 and 36.2 on April 1, compared with a three year average of 10.8 inches.

Southcentral Oregon

The 1952 supplies of water for Lake County based upon water content of mountain snows will be abundant and will in all probability equal or possibly exceed all historical records of streamflow in this area. Water content of mountain snow cover is excessively heavy this year and, in general, breaks all previous records on more than half the snow courses measured. Watershed soils appear to be well saturated, and crop land soils are about as wet as they can get. Agriculture in the County has been delayed well over 30 days so far, and extremely heavy runoff is just getting under way.

Lands in the Silver lake Valley will have an abundant water supply this season with the probability that the Thompson Valley Reservoir might be able to fill several times its present storage capacity of 17,400 a.f. No record is available of present storage in the Reservoir. Snow at Silver Croek Snow Course, at the low elevation of 4,900 feet, exceeds any previous measurement made on April 1 with a water content of 6.9 inches. The average for 11 years is 0.6 of one inch of water at this course.



The Christmas Lake Valley area is reported to be still under snow with heavy runoff yet to come.

The many springs which provide water supplies for the Summer Lake Basin should have considerably more water than a year ago. Water content of the snow at the Summer Rim Snow Course, elevation 7,200 feet, is 35.5 inches, compared to 20.5 inches a year ago. The 15 year average is 16.4 inches. Flow of Anna River is reported to be considerably increased over the past soveral years, and flow should continue to remain at high levels.

Water content of snow on the watersheds of the Chewaucan River is 212 percent of a year ago and 245 percent of average. An outstanding example is the water content of 17 inches at Mill Creek Snow Course, clovation 6,200 feet, compared with 7.2 inches a year ago and a 13 year average of 6.1 inches.

Flow of the Chewaucan River near Paisley is forecast this year for April-June at 150,000 a.f., compared with 64,400 a.f. for the ten year average, 1941-1950. The historical record was established in 1907 when a measurement of 144,000 a.f. was made for this period. Extremely high flows may be expected on this stream within the next few weeks.

Abort Lake now stands at two feet by the gage, a half foot higher than it was one month ago. It is expected that much water will reach the Lake this year from overflow of the Chewaucan River.

Crooked Creek has already been discharging large amounts of water and can expect a sustained flow later than usual this year.

Goose Lake Basin at the time of the Annual Water Forecast meeting was still covered with considerable snow, although water was beginning its annual runoff and many homes were already stranded in large lakes. Snow cover in this basin on April 1 was 236 percent of last year and 259 percent of average. Indicative of the exceptionally heavy snow conditions was the measurement of 18.2 inches of water at the Strawberry Snow Course, elevation 5,600 feet, compared with 6.6 inches a year ago and an 11 year average of 5.7 inches. Quartz Mountain Snow Course had 12.9 inches of water compared to 3.3 inches a year ago and a 21 year average of 4.1 inches.

On the east side of the Valley, Camas Creek Snow Course on the summit of the road to Warner Valley has a water content of 22.1 inches compared to a 13 year average of 10 inches.

Gates on Cottonwood Reservoir have not as yet been closed, but between 60 and 70 second feet of water were reported flowing through the structure earlier this week.

Drews Reservoir has a present storage of 45,500 a.f., but has been spilling between 350 and 400 second feet for several days to make room for much additional flow yet to come. Abundant water supplies should be readily available from this source.



Crane Creek, Dry Creek, and other small streams of the Gooso Iake Valley on both the west and the east sides should have discharges this year considerably greater than average and should sustain their flow much longer into the season.

Water supplies for Warner Valley lands will be equal to or perhaps greater than any over experienced in the history of water measurements in that area. It is expected that water will flow into Blue Joint Lake for the first time since 1943. Snow cover as represented by the measurement at Camas Creek, elevation 5,720 feet, are 221 percent of the 13 year average and 174 percent of a year ago.

Flow of Deop Crock as measured above Adel should reach 125,000 a.f. during April-June, compared with 63,900 a.f. for the ten year average and 70,300 a.f. in 1950. This would break the previous historical record of 108,800 a.f. established in 1938.

Flow of Twentymile and Honoy Creeks should have similar heavy volume and should provide a much longer sustained flow this year.

Hart Lake is very nearly full now, and Crump Lake has only one foot to go before it spills. Considerable damage has been experienced thus far on roads and bridges in the valley, but considerably more water remains to come from the watersheds.

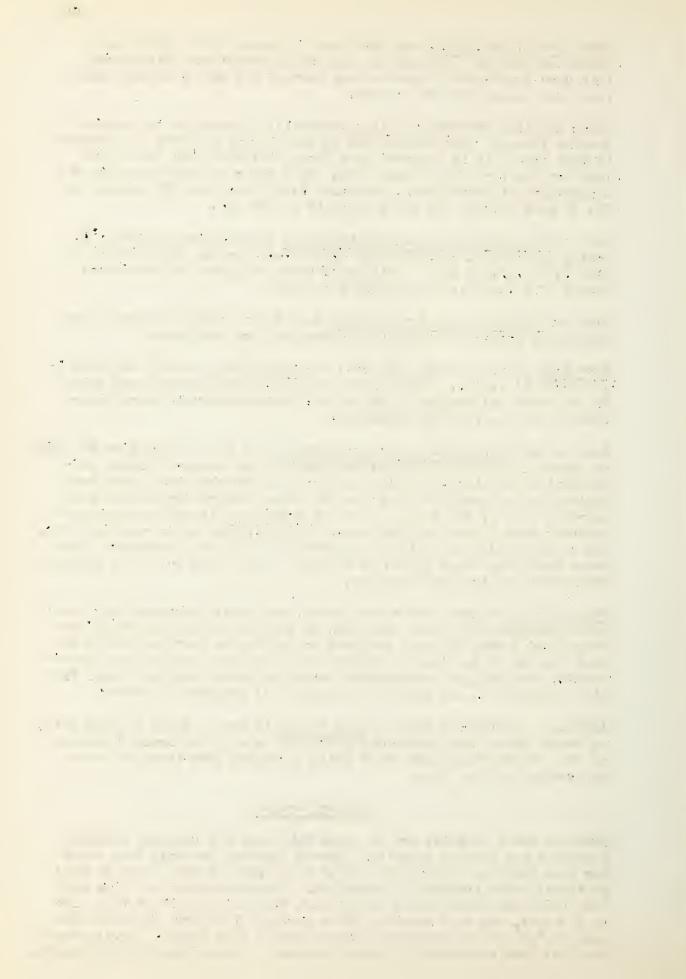
Snow on the Hart Mountain Antelope Refugo has been reported to be about 80 inchos in depth at headquarters, most of the winter. Excess precipitation totaling 2.5 inches in March has brought early flood conditions in the area with four feet of water passing through the headquarters area of the Refuge. Flow of Rock Creek itself has surpassed anything seen in the past 60 years. Even so, snow cover remains heavy, and considerably more water is expected in all these drainages. Most water holes have been filled to capacity long since, and water supplies throughout the area are abundant.

Guano Valley is much wetter than normal and should certainly have ample water supplies this year. The snow as measured at Bald Mountain contains 10.4 inches of water compared to 1.3 inches last year and a 12 year average of 2.8 inches. Extremes of flow have already been experienced, but again, a considerable amount of water remains to come from these watersheds, and high water damage will undoubtedly result.

Although agricultural work in Lake County is now at least 30 days late, it would appear that considerably more delay will be incurred because of the exceptionally high water which is coming down from the lower watersheds at this time.

Southern Oregon

Abundant water supplies are in sight this year for Klamath, Jackson, Josephine and Douglas Counties. Record breaking mountain snow cover has been reported throughout most of this area and will bring in many places all-time records of streamflow. Watershed soils and also crop land soils are considerably wetter than they usually are at this time of the year, and as a result, little water will be lost from the snow pack to "prime" the watershed before surface flow begins. Agricultural work has been considerably delayed because "the wetness of the season.



Snow cover on the Klamath Basin Watersheds is the heaviest measured since the snow survey records began with present water content of the snow 102 percent greater than average and 72 percent greater than last year.

Sprague River near Chiloquin has a ten year average discharge of 219,100 a.f. for the April-September period. This year's flow is forecast at 500,000 a.f., compared to 282,200 a.f. last year. This will exceed the historical record of 460,600 a.f. established in 1943. Snow cover on the head of the Sprague River is this year 181 percent greater than average and 167 percent greater than last year. Extremes of high water in this Drainage can certainly be expected.

Discharge of the Williamson River below Sprague River for the ten years 1941-50 has averaged 361,500 a.f. Last year's flow was 457,600 a.f. The forecast for 1952 for the six months' period is 750,000 a.f., which will exceed the historical figure of 703,500 a.f. which was established in 1943. Discharge for April-July should be 825,000 a.f. Snow cover on this watershed is 91 percent greater than average and 53 percent greater than a year ago. Extremes of high water should certainly be expected.

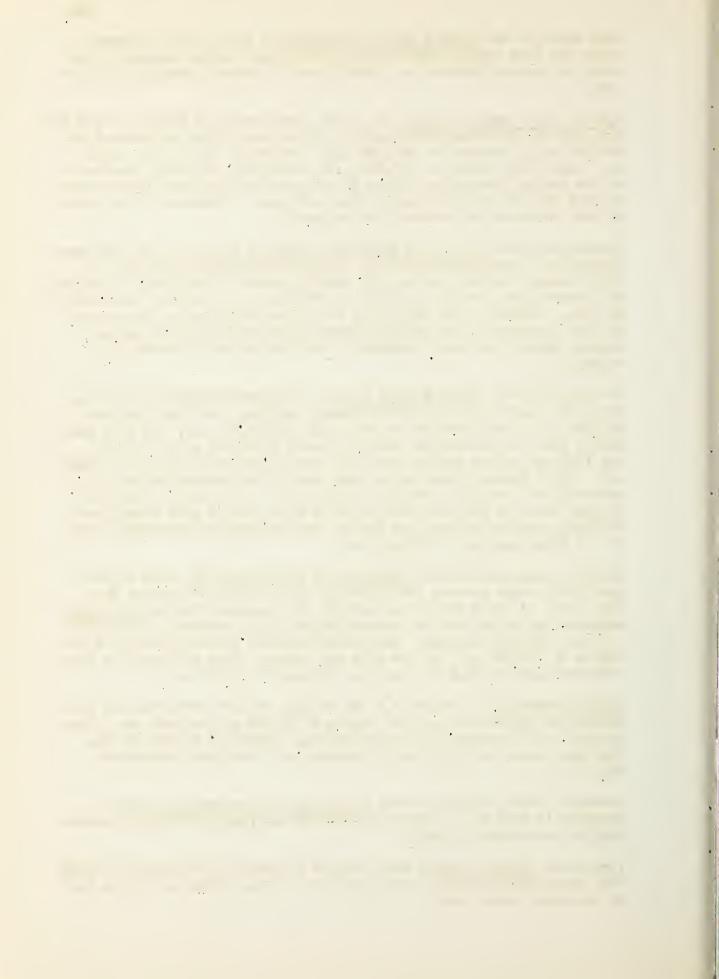
The net inflow to Upper Klamath Lake in the April-September period has averaged 462,900 a.f. in the ten years, 1941-50. The 1951 flow was 611,000 a.f. The forecast for this year is 925,000 a.f. and will very nearly equal the historical record flow of 1,008,800 a.f. in 1907. The 1943 net inflow was 858,000 a.f. April-July flow should be 785,000 a.f. Upper Klamath Lake has in storage as of this date 382,600 a.f., compared to a ten year average of 425,100 a.f. The Lake is spilling to make room for much streamflow yet to come, and it will likely be a difficult problem to keep the inflow from raising the Reservoir level to the total capacity of 584,000 a.f.

Mountain snow cover in the Gerber-Clear Lake Reservoir areas is this year 215 percent greater than average, and 214 percent greater than last year. A heavy inflow has already been received in the Clear Lake Reservoir which now has in storage 156,800 a.f., compared to 248,800 a.f. the ten year average. This Reservoir will probably receive a net inflow of 130,000 a.f. in the next six months. This flow will be considerably greater than the ten year average of 39,600 a.f.

Gerber Reservoir has 26,200 a.f. in storage compared with the ten year average of 44,800 a.f. and the figure of 57,600 a.f. a year ago. This Reservoir will probably fill this season. Estimated inflow for the next six months is 81,000 a.f., compared to a ten year average of 18,100 a.f.

Heaviest recent inflows to both Clear Lake and Gerber Reservoirs occurred in 1938 when slightly less water was received than is indicated for the season of 1952.

Throughout Klamath County, most smaller reservoirs are reported already full or certain to fill. This should be a satisfactory condition for an excellent water year.



Water content of the snow cover on Rogue River Watersheds is 92 percent greater than average and 88 percent greater than a year ago. Snow records run back a total of 22 years in this area and present measurements are equal to or greater than past records on ten out of 14 snow courses. Watershed soils under the snow pack are already well saturated and reports indicate that crop land soils in the Rogue Basin are also deeply wet.

On the Upper Rogue River, snow cover is now 68 percent greater than average and 42 percent greater than in 1951.

Discharge of the Rogue River above Prospect for the past ten years has averaged 305,100 a.f. The 1951 discharge was 345,500 a.f. The forecast for 1952 in the April-September period is 445,000 a.f. which will exceed the historical record of 430,500 a.f. established in 1933. April-July discharge is forecast at 390,000 a.f.

Discharge of the Rogue River, Middle Fork plus the Power Canal has averaged 73,600 a.f. for ten years and in 1950 was measured at 82,500 a.f. Flow this year is expected to be about 100,000 a.f., which is greater again than the historical figure of 95,600 a.f. measured in 1933. April-July discharge is forecast 82,000 a.f.

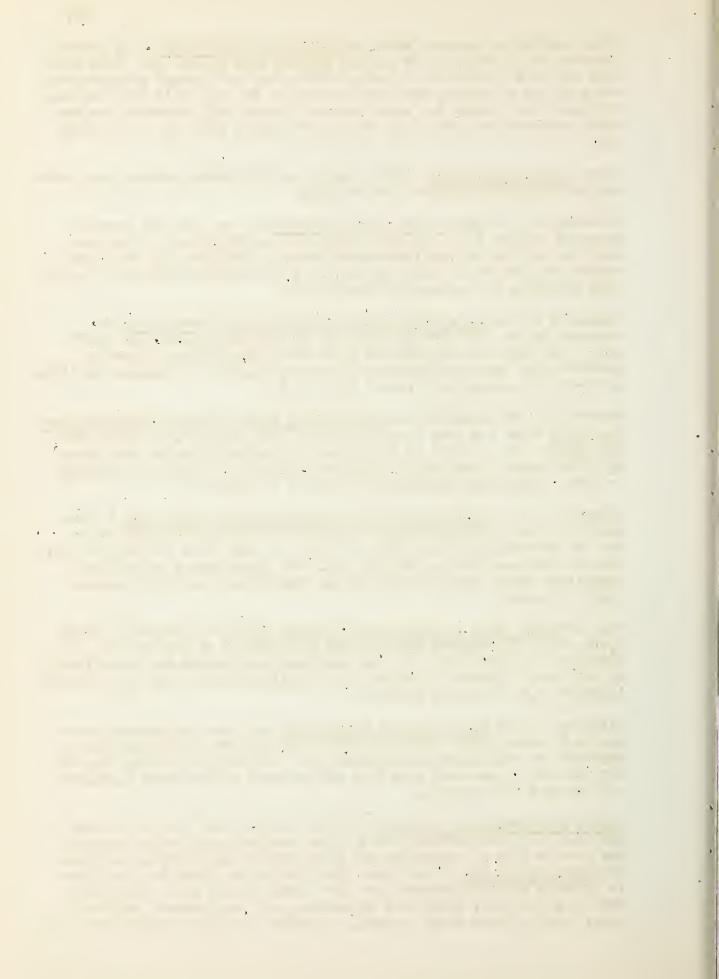
Records will be broken on the Rogue River, South Fork near Prospect plus the Canal where ten year average flow has been 74,600 a.f. and in 1950 was 91,800 a.f. A total of 107,000 a.f. is expected in the six months, April-September. This will exceed the 105,100 a.f. which was measured in 1949. April-July discharge is forecast at 95,000 a.f.

Discharge of the Main Rogue River as measured below South Fork is forecast this year at 925,000 a.f., a greater flow than the 890,700 which was the previous high, measured in 1933. The 1950 flow was 808,800 a.f., and the ten year average, 656,900 a.f. The first four m nths of the irrigation season this year will bring 784,000 a.f. past this stream gaging station.

Flow of Rogue River at Raygold near Central Point is expected to reach 1,215,000 a.f., compared with the ten year average of 882,300 a.f. The 1950 flow was 1,057,600 a.f., and the historical record was established in 1917 with a flow of 1,474,700 a.f. April-July this year should bring 1,055,000 a.f. past this station.

Discharge of the Rogue River at Grants Pass has been continuously measured only since 1939. Forecast of the flow for the six months April-September at this point is 1,235,000 a.f. The ten year average flow is 857,800 a.f. A previous high flow was measured in 1948 when 1,138,100 a.f. cleared this station.

Grants Pass Irrigation District will have ample water for this season but will find some problems posed by the excessive high water which at the present time is preventing the placing of flash boards at the peak of Savage Rapids Dam. A continued high flow of the River for some time is expected with considerable low snow still orming out. Exact time when peak flow will be reached is unknown, but past records indicate peaks usually occur early in April. However, some have occurred as late



as the 10th of June. Present flow of the River at Savage Rapids Dam is about 8,200 second feet. Alternation of pumping into the District's Canal begins only when the River drops to 870 second feet. There seems to be no indication that the River will fall anywhere near this low this season.

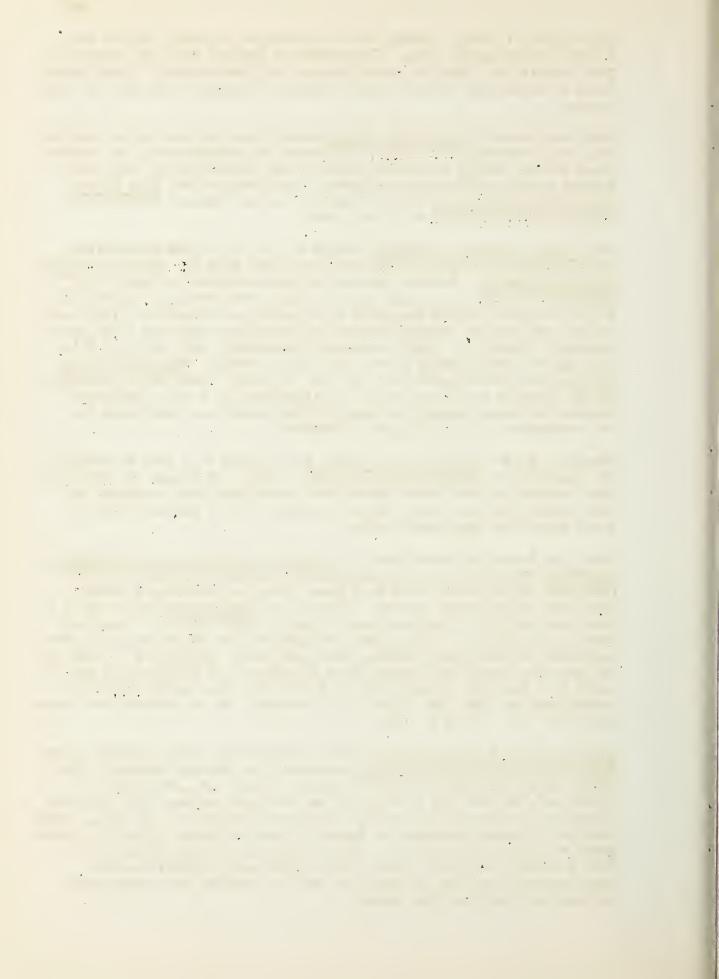
Irrigated lands of Bear Creek Valley should have adequate water supplies this year, especially if normal conditions of precipitation and temporature provail during themelting season. Any repetition of last year's drought could easily reduce supplies. Snow cover on the Bear Creek-Little Butte Watersheds is this year 104 percent greater than average and 161 percent greater than last year.

The Talont Irrigation District, forced to use all of its reservoired water supplies last year, began this year with very low storage at Hyatt Prairie Reservoir. Present storage in this Reservoir is 4,600 a.f., compared to 6,700 a.f. a year ago and a ten year average of 6,000 a.f. Inflow to Hyatt Prairie Reservoir this season is forecast at 9,000 a.f. for the six menths period, compared to 3,800 last year and a ten year average of 5,800 a.f. Hyatt Reservoir undoubtedly will not fill this year unless exceptionally heavy rains should occur. Emigrant Gap Reservoir, which holds 8,300 a.f., is full as usual. Total water available to the District this year should be sufficient for a good irrigation season, but normal spring and summer rains would be a great help to the management of this Irrigation District.

Discharge in the McDonald Crook Canal is expected this year to exceed the discharge of provious years by quite a bit. 30 inches of water have been measured in the Wagner Butto Snow Course this year, compared to 13.7 inches last year and a 17 year average of 16.9 inches. This is a new record for this Snow Course.

Water for lands irrigated under the Medford and Regue River Irrigation Districts comes from the same watersheds, including Fourmile and Fish Lake Reservoirs. Snow cover ever these areas is exceedingly heavy, exceeding all previous records. Storage in Fourmile Lake as of April 1 this year is 6,300 a.f., compared to 12,600 a year ago and a ten year average of 6,100 a.f. The extreme drought of last season caused a great reduction in reservoired storage this past year. Inflow yet to come in the next six menths to Fourmile Lake is forecast at 11,500 a.f., compared to a ten year average flow of 8,100 a.f. The record inflow was established in 1943 with 12,700 a.f., received. It is possible that this Reservoir will fill this year.

Inflow to Fish Lake Rosorvoir is bost indicated by gaging station at the North Fork of Little Butte Creek, corrected for storage changes. This stream is forecast this year to discharge 19,500 a.f., compared to 17,900 a.f. in 1950 and 14,300 a.f. the ten year average. The provious historical record of flow for this stream was 22,800 a.f. in 1921. Fish Lake has a storage capacity of 7,800 a.f. and now holds 5,700 a.f., compared to 6,100 a.f. a year age and the ten year average of 4,700 a.f. This Reservoir will fill several times this year. Adequate water supplies are therefore in sight for both the Medford and Regue River Irrigation Districts this season.



Eaglo Point Irrigation District will receive abundant supplies of water this year from the exceedingly heavy water content in the snew cover on their watersheds. These lands usually have good water supplies, but this year's supply will be outstanding.

The Applogate and Illinois River Watershods have an exceptionally heavy snew cover this year, probably breaking all provious records, since two out of the four courses reported have established new historical records of water content. Snew cover has extended so much lower than normal this year that it has made travel to the snew courses a much greater problem than usual.

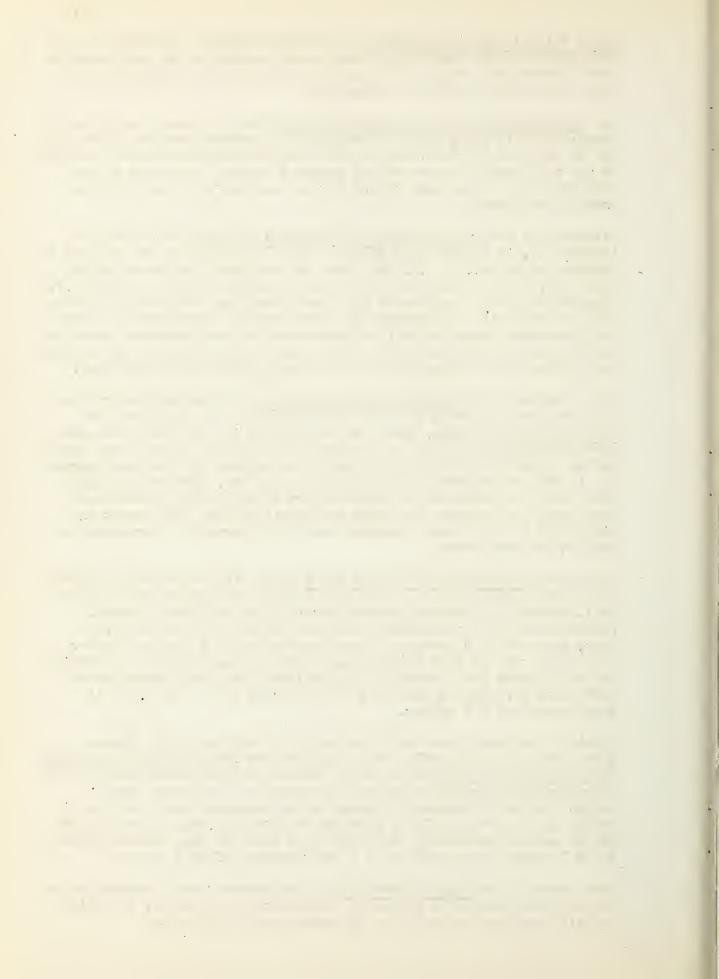
Discharge of the Applogate River as measured near Ruch has averaged 114,800 a.f. in the ten year period. It was 140,200 a.f. in 1950 and is forecast to be 300,000 a.f. this year for the April-September period. This flow, if received, will exceed the historical flow of 217,500 a.f. measured in 1938. Extremes of high water early in the discharge period will be likely if this forecast is substantiated. Regulation of water for late water rights on smaller tributaries in this watershed should be considerably delayed this year. Snow cover on the Applogate is 112 percent greater than average and is 127 percent greater than last year.

Water outlook on the Illinois River Drainage is exceedingly heavy this year with the likelihood that the all-time record of streamflow for Illinois River at Kerby, which was established in 1937 with a measurement of 367,500 a.f., will be exceeded this season. Present snew cover on the headwaters of this watershed is 140 percent greater than average and is 268 percent greater than it was a year ago. Extremes of high water can be expected in the earlier part of the runoff season even with normal conditions of melting and precipitation. Any excess precipitation is apt to cause serious damage by abnormally increasing the melt of the snew cover.

The flow at Doer Crook and Sucker Crook along with other small Illinois Valley streams heading in the general vicinity of Grayback Peak should be in excess of historical records for the April-September period. Present snow cover on Grayback Peak Snow Course, at elevation 6,000 feet, centains 50.5 inches of water compared to 18.7 inches of water last year. The 16 year average here is 24.5 inches of water. Likewise at the Althouse Snew Course, elevation 4,400 feet, the present water centent is 24.3 inches, compared to 1.6 inches a year age and a 15 year average of 6.7 inches.

Hoavier than normal snow cover on the low elevations of the Umpqua-Regue Divide should provide water supplies for Evans Crock, Grave Crock and Jump-Off-Joe Crock in excess of anything soon in recent years. However, favorable precipitation will be needed to keep these streams active late in the season. Although no measurements have been made in recent years on the Geolaway Mountain Snew Courses, the water content of the snew at Whaleback, elevation 5,140 feet, is 51.8 inches compared to 33.3 inches a year age and a 14 year average of 33.9 inches.

Snow covor in the Umpqua River Basin is 75 percent above average and 46 percent above that of a year ago. Streamflow at the higher elevations in this watershed has not been excessive as yet this year.



Discharge of the Clear water River above Trap Crock is forceast at 75,000 a.f. for the April-September period. This will be a new record, being slightly in excess of the 74,200 a.f. measured in 1943. The ten year average flow at this station is 62,000 a.f.

Flow of the North Umpqua Rivor bolow Lake Crock is forecast at 195,000 a.f., compared with 189,000 a.f. in 1950 and a ton year average of 160,500 a.f. Provious high flow in this stream was recorded in 1943 when 206,800 a.f. were measured.

Farthor downstream, the North Umpqua River at Toketee Falls should have a flow of 470,000 a.f. this year, compared to 445,300 a.f. a year ago and 372,900, the ten year average. 1950 astablished a new record flow at this station with 467,400 a.f. This year's flow as forecast, if substantiated, will exceed slightly this historical figure.

Willametto Valley Watersheds have a heavy snow pack ranging from 125 percent greater than average in the south to 26 percent greater than average in the north.

Headwaters of the Coast Fork of the Willamette River now contain water in the snow 99 percent greater than a year age and 125 percent greater than average. Cortainly a heavy runoff should be obtained in this area this year.

On the Middle Fork of the Willemette, the snew cover is 84 percent greater than average and 43 percent greater than a year age. Flow of the Middle Fork of the Villamette at Eula is forecast at 1,200,000 a.f. for the next six menths, compared with a ten year average of 824,400 a.f. The 1950 flow was 1,125,000 a.f. The provious record flow of this stream was established in 1933 when 1,286,600 a.f. were discharged.

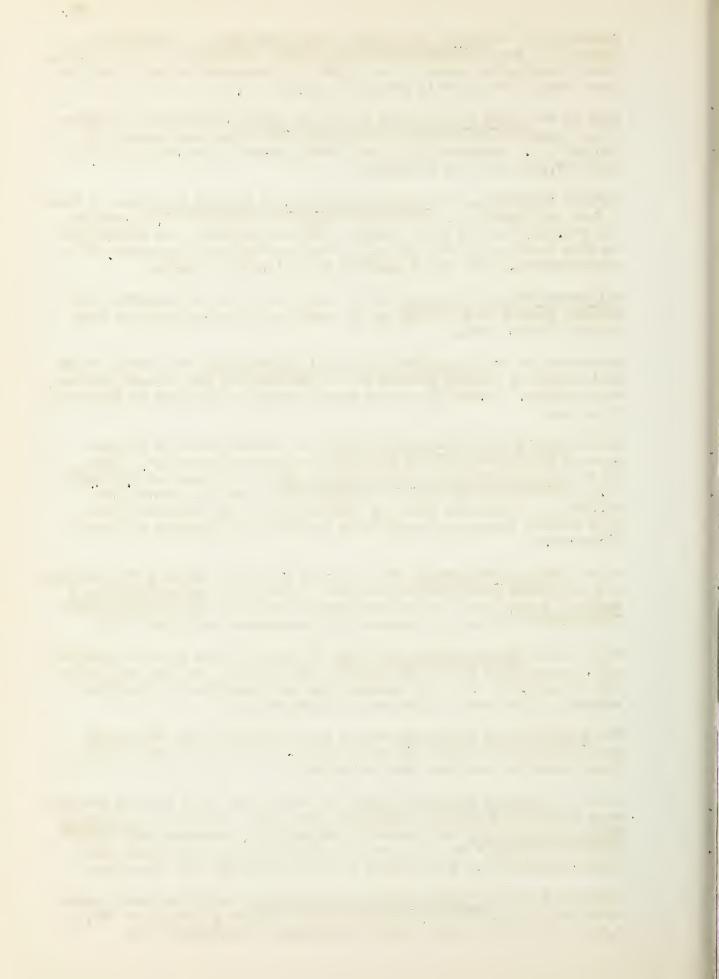
On the McKenzie Watershed, snow cover is 53 percent greater than average and 19 percent greater than last year. Flow of the McKenzie River at McKenzie Bridge has a ten year average of 562,500 a.f. The 1950 flow was 771,800 a.f. and the forecast for this season is 675,000 a.f.

Flow of the McKenzie River near Vida is forecast this year at 1,465,000 a.f., compared to 1950 discharge of 1,725,200 a.f. The ten year average is 1,214,000 a.f. The maximum flow was established at the Vida station in 1933 with a discharge of 1,734,700 a.f.

The Santiam River Watershods have a snew cover this year 67 percent greater than the average and 21 percent greater than in 1951. Streamflow should be about the same as in 1950.

On the Clackamas Rivor Watershod, the snow cover is 26 percent greater than average, but only 91 percent of last year. Flow of the Clackamas Rivor at Big Bettem is forecast at 198,000 a.f., compared with 235,400 a.f. in 1950 and a ten year average of 163,400 a.f. The first four menths, April-July, should bring a total of 162,000 a.f. this year.

Forecast for the Clackamas River near Cazadore, April-September period this year is 912,000 a.f., compared with a ten year average of 796,300 a.f. and the flow of 1950 which was measured at 1,158,300 a.f.



Snow covor on the Sandy River Watersheds is 26 percent greater than average, but only 96 percent of what it was in 1951.

Snow cover on Mary's River Watershod on the west side of Willamette Valley has a water centent of 25.4 inches compared with the 11 year average of 10.3 inches. Discharge of Mary's River should be about the same as in 1949.



		Av.Water Content	(Inches)
		Years 6	1951 1950 Record (Inches
REMENTS	In.)	prox.	1950
SNOW COVER MEASUREMENTS	Water Content (In.)	Same Approx. Date	1921
SINOW COV	Water C		1952
	•	Snow	(In.)
		Date of	Sur vey
			Eleve
LOCATION			Twp. Range Elev.
្ន			State Sec. Twp.
:		Number	State
	DRAINAGE BASIN	and SNOW COURSE	

UPPER COLUMBIA DRAINAGE
LOWER SNAKE IN OREGON

	24.6	20 ° 6	11.6	10.5	2,1	10 47	12,5	13.8	8•6	3.8	10.1	9•6	9.2	8.7	8.2	6.5	10.8	12.7	11 6	3.2	0.5
	12	တ	12	#	디	16	4	14	12	17	7	24	H	11	#	12	83	2	#	7	음
	27 •0	23.0	11.9	10.2	0.0	8.8	16.8	15.0	11.0	0	8•4	12.7	8.8	10 • 1	8.7	8.2	7.2	18.3	14.5	0	0.0
	32.8	22.8	11.0	10.4	0.0	8.8	t t	15,8	6.2	0.5	9.5	12,5	10.2	10.8	6.1	9.4	10.9	17,2	ŀ	0	0.0
	43.2	33.0bca	avalanche	20°8pc a	D	avalanche	ď	3/29 67.5 26.5a	19.5bca	10.2bca	22.8bca	19.1a	20.3bca	avalanche	avalanche	12.6bca	36.2ª	31 •5pc	ğ	•	6.7ba
	3/29 109.7 43.2	. 95 .1	layed due	54,03	Not Measured	layed due	ot Measure	67 • 5	58.9	28.8	53.2	48.6	55.0	layed due	layed due	34.1	76.4	75 •0	Not Measured	41.4	17.1
	3/29	3/27f	Meas • de	$4/1^{f}$	Z	Meas. de	A	3/29	3/28	$4/1^{f}$	$4/1^{\mathrm{f}}$	4/3	4/1	Meas do	Meas • de	4/3	3/30	4/4	Z .	$4/1^{f}$	4/1f
	7900	7800	7 800	7250				0069												6200	5700
	33 E	28E	39臣	43E	46E	39正	58臣	33五	5 8E	53E	53E	29E	54E	39E	40E	26E	34正	3W	2M	53E	55 E
	338	46 N	44M	42N	39N	45N	44N	328	46 N	42N	43N	45N	43N	45N	44 N	45N	47 N	58	7.8	39N	39N
	4	31	22	O.	18	H	9	35	33	18	36	30	31	25	18	31	ω	9	35	35	တ
	952	Nevel	Nev.4	Nevelo	Nev.6	Nev.2	Nev.4	951	Nev. 2	Nev.9	Nev.8	Nev.6	Nev.7	Nev.1	Nev.3	Nev.5	Nev•6	Idaho 12	Idaho13	Nev.12	Nev.11
OWYHEE RIVER	*Fish Creek	*Bear Creek	*Oranite Peak	Upper Jack Creek	*Widas	*Upper Buckskin	*76 Creek	*Silvies	*Fox Creek	Lower Jack Creek	Rodeo Flat	Big Bend	Fry Canyon	*Lower Buckskin	*Martin Creek	Gold Creek	*Disaster Peak	Silver City	South Mountain #2	Taylor Canyon	*Tremewan Ranch

*Not located directly on this drainage area.

aTelephonic faption of the faption of the faption of date facts of date, since record began-

н м А I ш = 1 м б

OREGON SNOW SURVEYS - ABOUT APRIL 1, 1952

				10000	TONIO	10001	27 77 77	1001				
		I	LOCATION	NC				SNOW COV	SNOW COVER MEASUREMENTS	REMENTS		
DRAINAGE BASIN				,				Water C	Content (In.)	In.)		
and SNOW COURSE	Number	00				Date	Snow		Same Approxe	prox.	Years	Av.Water Content
	State	Sec	TwD.	Range	Elev.	Survey	(In.)	1952	1951	1950	Record	(Inches)
MALHEUR RIVER	•											
*Barney Creek	143	16	148	36 E	5950	3/27	37.8	13.0b	7.3	11.6	7	8.9
Blue Mountain Springs	133	21	158	35E	2300	3/27	60.5	23.1	17 •5	19.7	22	14.9
Crane Prairie	137	54	168	34压	5375	3/27	41.0	16.1bc	10.8	12.1	14	8.3
Lake Creek	136	9	168	33 <u>2</u> E	5120	3/29	40.0	15.9b	13.5	13.8	1 4	9 . 7
Rock Spring	134	23	185	32E	2100	3/29	25.9	9.1e	5.5	8•4	91	4.7
Stinking Water	135	33	213	34E	4800	3/25	25.1	9 ° 5pc	0•0	E	13	0.5
BURNT RIVER												
Barney Creek	143	16	148	36 E	5950	3/27	37.8	13.0b	7.3	11.6	7	8•9
Dooley Mountain	156	32	118	40 E	5430	3/28	38.3	14.8bc	10.2	10.5	13	8•6
*Gold Center	249	21	9 <u>S</u>	36E	5340	3/31	44.4	17.7 bc	14.4	16.8	13	11.5
Tipton	142	8	108	35 <u>2</u> E	2100	3/31	33.7	13,0	1	ł	17	9•6
Blue Mountain Summit	141	9	128	36E	5098	4/2	37.1	13.2 ^D	8°S	12.0	17	7.3
PONDER RIVER												
Anthony Lake	155	18	78	37E	7125	3/25	88 •5	31.5	28.1	32.6	16	27 •5
Goodrich Lake		34&35	88	38E	6775	4/1	116.2	21.0bc	42.0	48 •2	√H	39.1
Summit Springs	184	တ	68	37E	0009	3/26	69.3	24.2	21.7	1	12	21.4
Bourne	154	33	88	37 E	2800	3/28	56,3	20.1	18.5	20 • 2	92	
Taylor Green	186	က	8 9	42E	5740	4/1	63.4	24.4	17 • 1	17.9	1 4	16.3
								,				

*Not located directly on this draimge area.

bGreatest April 1 water content recorded since snow surveys began.

**Greatest water content, regardless of date, since record began.

**Greatest water content recorded since snow surveys began.

		H	LOCATION	Į.				SNOW COT	SNOW COVER MEASUREMENTS	REMENTS		
DRAINAGE BASIN								Water (Water Content (In.	(In.)		
and	Number					Date	Snow		Same Approx.	prox.	Years	iv.Water
SNOW COURSE	or	6 5	į	D 25	ال الق	of	Depth	1059	Date	9201	Of	Content (Trop of)
	SCALE	DAG	O CAN	TWP PAIR 6	PTEN	am vey	(•111)	1305	1221	7320	necota	TIGHES
POWDER RIVER (Cont'd)												
Dooley Mountain	156	32	118	40E	5430	3/28	38.3	14. Pbc	10.2	10.5	13	8•6
Eilertson Meadows	151B	18	88 8	38E	5400	3/30	42.9	17.0 ⁰	14.5	14.8	14	ליון היור
*Gold center	643	10	g	व	O# ••••••••••••••••••••••••••••••••••••	10/0	44.	1017	H H H	0 0 H	3	2011
PINE CREEK												
Schneider Weadows	161	35	68	45E	5400	4/1	116.3	45 • 4	30.8	30.4	14	28.8
IMMAHA RIVER												
	183	16	48	45E	7480	3/30	116.8	45.7	42.•3.	45 • 3	18	36.0
*Aneroid Lake No. 2 Coverdale	183A 171	16 22	45 55 8	45E 47E	7000 4250		92.9 Not measured		31.9	32.6	01 4	80 80 80 80 80 80 80 80 80 80 80 80 80 8
GRANDE RONDE RIVER												
Aneroid Lake No. 1	183	16	48	45E	7480	3/30	116.8	47 •5	42.3	45 • 3	18	36.0
Anthony Lake	155	18	7.8	37臣	7125	3/25	88.5	31.5	28.1	35.6	91	27 •5
Aneroid Lake No. 2	183A	91	4S	45E	2000	3/30	92.9	37 .5 bc	31.9	35.6	음	29 •3
Summit Springs	184	တ	89	37 E	0009	3/26	69.3	24.2	21.7	ł	15	21.4"
Camp Carson	187	33	6S	36臣	2970	Rep	Report Delaye	pg	. 10 6	14.1	13	10.1
Moss Spring	186A	88	3 S	41E	5850	3/31	74.2	28.1	22.6	27.1	급 :	24.9
Taylor Green	185	62	63	42E	5740	4/1	63.4	24.4	17 • 1	I7 •9	4	16.3
* * * * * * * * * * * * * * * * * * *	13		•									

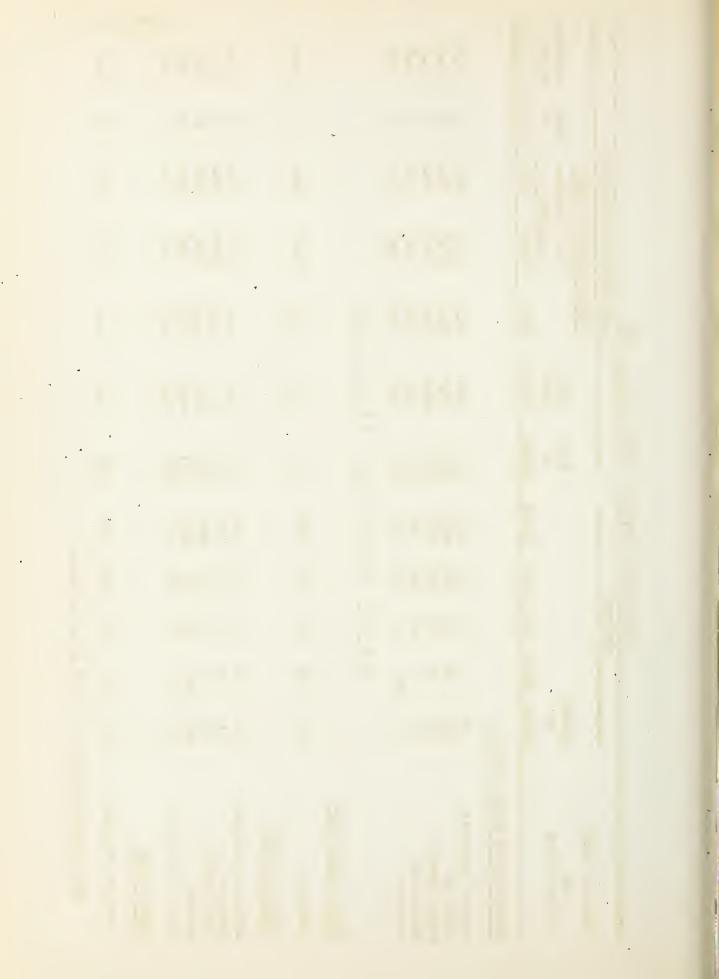
bgreatest April 1 water content recorded since snow surveys begancGreatest water content, regardless of date, since record began. *Not located directly on this drainage area.

. . 1 = 1 = 7

	İ
2	į
1952	Į
ö	ı
ä	į
	i
	ļ
ہ	į
_	I
7	l
APRIL	ŀ
24	ŀ
Α,	ŀ
4	ŀ
	ł
Н	ľ
ABOUT	ı
Q	l
벙	į
4	E
	ľ
•	i
ra	Į
×	į
ш	ĺ
SURVEYS	1
2	ł
5	I
5	ĺ
	į
3	ľ
SHOW	1
1	1
S	ł
	į
奚	ł
OREGON	1
ပ္သ	1
띗	1
兴	į
J	Ì

			LOCATION	N				SNOW CO	SNOW COVER MEASUREMENTS	EMENTS		
DRAINAGE BASIN								Water	Content (In.)	In.)		
and SNOW COURSE	Number	٠.				Date	Snow Depth		Same Approx. Date	prox.	Year s	Av.Water Content
	State	Sec.	Twp.	Range	Elev.	Survey	(In.)	1352	1921	1950	Record	(Inches)
GRANDE RONDE RIVER (Cont'd)	ont'd)											
Beaver Reservoir	188	8	58	37E	5340	3/30	38.0	12.8	13,3	16.7	13	11.9
Tollgate	212	32	4N	38E	5070	3/31	91.1	35.6	28.7	32 •5	21	27 • 4
*Lucky Strike	223	28	38	32 E	5050	3/28	40.3	13.6	16.2	18.3	13	13.1
Schoolmarm	248	28	45	34E	4775	3/27	18.7	5.6	5.0	6 •5	വ	3.5
Meacham	221 2	24&25	15	35E	4300	3/31	28.4	6•6	8.2	12•4	23	8.6
		미	LOWER R	0	L U	BIAD	RAIN	দ্র। ড				
WALLA WALLA RIVER												
To 11 gate	212	33	4N	38E	9009	3/31	91.1	35.6	28•7	32 05	21	27.4
UNATILLA RIVER												
Arbuckle Mountain	241	33	48	29臣	5400	3/30	33.6	14.4	12.9	16.0	23	10.4
Tollgate	212	83 C	4N 20	38E	5070	3/31	91.1	35.6	28•7	32.5	21	27 • 4
Mesopam	223	24825	9 C	35 E	4300	3/28	40.3	13.6	707	12.4	3 6	100 100 100 100 100 100 100 100 100 100
Emigrant Springs		29	A	35E	3925	3/31	20.1	6.4	4 8	8	23	5 G
WILLOW CREEK												
Arbuckle Mountain	241	33	45	29E	5400	3/30	33.6	14.4	12.9	16.0	23	10.4
10		1 1 1 1 1	•									

*Not located directly on this drainage area.



		J	LOCATION	N.				SNOW COVER NEASUREMENTS	ER MEASU	REMENTS		
DRAINAGE BASIN								Water C	Water Content (In.)	In.)		
and SNOW COURSE	Number or					In te	Snow Depth		Same Approx. Date	prox•	Year s of	Av • Water Content
	State	Sec.	1	Twp. Range	Elev.	Survey	(In.)	1952	1951	1950	Record	(Inches)
JOHN DAY RIVER												
*\nthony I oke	155	18	7.8	37 E	7125	3/25	88.5	31.5	28.1	32.6	16	27 •5
Dixie Springs	244	28	118	34E	6650	4/1	78.0	31.8bc	25.1	27 •0	16	23.3
*Snow Wountain	965	-	198	26E	6300	3/27	58.6	21.5bo	16.2	16.1	∞	14.3
Clive Lake	245	14	SS	$33\frac{1}{2}$ E	0009	3/31	71.9	27.7	20.3	21.7	16	19.3
Blue Mountain Springs	133	21	158	35E	2900	3/27	60.5	23.1	17 45	19.7	22	14.9
Arbuckle Mountain	241	33	48	29压	5400	3/30	33.6	14.4	12.9	16.0	23	10.4
Gold Center	249	21	Se	36压	5340	3/31	44.4	17.7 ^{bc}	14.4	16.8	13	11.5
*Izee Summit	964	28	165	29日	5293	3/28	39.1	13.8 ⁰⁰	6.6	10.3	91	7 • 3
Starr Ridge	247B	20	158	31E	5156	3/28	29.5	10.5°	5.5	7.1	91	4.3
Tipton	142	34	108	35 } E	5100	3/31	33.7	13.0	1	. !	17	9.6
Blue Mountain Summit	141	9	128	36E	5098	4/2	37.1	13.2 ^D	9 . 2	12 0	17	7.3
*Lucky Strike	223	28	38	32五	5050	3/28	40.3	13.6	16.2	18.3	13	13,1
Beech Creek Summit	246ú	4	128	30E	4800	3/28	25.0	7.4	4.2	7.3	12	4∙8
Schoolmarm	248	28	48	34E	4775	3/27	18.7	5.6	5.0	6.5	ເນ	3.2
CROOKED RIVER												
*Snow Wountain	365	~	198	26E	6300	3/27	58.6	21.5 bc	16.2	16.1	∞	
Derr	343	14	138	23臣	5670	3/31	41.5	15.1 bc	10.9	12.7	15	10.3
Ochoco Meadows	341	21	138	20E	5200	3/29	43.1	17.5 ^b	12.8	14.0	23	
Marks Greek	344	25	128	19E	4540	3/29	21.9	q6 ° 9	3.3	5.8	14	
*Not located directly on this drains	t uo an +	د در	_	976.97								p•

dEqual to greatest water content measured, regardless of date, since record began. bGreatest April 1 water content recorded since snow surveys began-Greatest water content, regardless of date, since record began. *Not located directly on this drainage area.

. . .

			OPERO	A COMP	CLEAVING WOWL WITH THE	TOOOT	לד ידיוו דעי דססקעי	10 0k				
			LOCATIO	3				SELOW COV	SNOW COVER MEASUREMENTS	KEMENIO		,
DRAINAGE BASIN								Water C	Water Content (In.)	In.)		
and SNOW COURSE	Number					Date of	Snow Depth		Same App Date	Approx. Date	Years	Av.Water Content
	State	Sec	Twp	Range	Elev.	Survey	(In.)	1952	1951	1950	Record	(Inches)
DESCHUTES RIVER												
New Dutchman Flat	324A	21	185	36	6400	3/24	173.9	77 .1bc	68•6	67 • 3	15	50.2
Windigo Pass	744	20	25 S	田9	5800	3/22	166.6	62,3bc	56.1	57 • 4	74	53.4
Charlton Lake	327	23	218	6正	5750	3/28	116.4	49.6bc	1	1	H	26.1
Three Creeks Meadows	331	ы	17S	3 6	2600	3/25	74.8	30.5	33.4	30.9	23	20.3
Willamette Pass	3 23	21	248	5法压	2600		166.0	64.6bc	49.0	54.0	∞	40 • 4
Irish-Taylor	329	53	208	9	2200	3/29	144.9	64.0bc	45.0	56.8	~	50.9
*Waldo Lake	521A	12	218	至9	2200		114.7	50.1bc	40.6	45.9	14	27.8
Cascade Summit	321	7	23 S	9	4880		121.8	54.5bc	40 e 6	51.3	22	30.5
*Chemult	834	21	278	8E	4760		50.4	21.4bd	11.0	14.2	15	8•0
Crescent Lake	325	1	248	E B	4760	3/21	68.0	25.7bc	24.8	20.5	17	9•4
Hogg Pass	351	24	138	7點	4755	3/29	139.4	8.09	55.4	58.9	14	42.6
Caldwell Ranch	326	30	218	8E	4400	3/26	46.7	18.2bc	13.8	17.6	14	8•0
*Brooks Meadows	431	ત્ય	28	10臣	4300	3/26	39.1	17.2	15.4	21.9	19	11.1
Rock Creek	362	Н	48	10E	4200		Not Measured	å	i	ł	4.	12.6
Clear Lake	361	53	4S	吕	3500	3/28	45.6	17.8	18.4	25.6	02	14.1
HOOD RIVER												
Tilly Jane-Mt. Hood	432	15	22.0	88	0009	3/23	137.0	80°09cg	58.0	59.1	4	23.08 Adv
Red Hi 11	434	21	153	日6	4400	3/30	135.0	59.3	56.2	81.64	4	
Brooks Meadows	431	c ₂	28	10E	4300	3/26	39.1	17.2	15.4	21.9	19	
Greenpoint Reservoir	433	28	SN	B	3400	4/3	51.1	22.1	8 . 8 f	31.70	4	20.3
	etly on 1	chis d	rainag	e area	•			Ģ	r 1 (. 6
April 15, 1950 Ogreatest April 1 water content recorded since snow surveys began.	1 water c	onten	t recor	ded si	nce suc	w surveys	began.	April 14, 1951 RPartly estimated	, 1951 stimated			
Gereatest water content, regardless	content,	regar	lless	f date	, since	of date, since record began.	egan.					
"Equal to greate	st water	conter	ıt meas	nred,	regardl	ess of da	content measured, regardless of date, since	record began.	gan•			

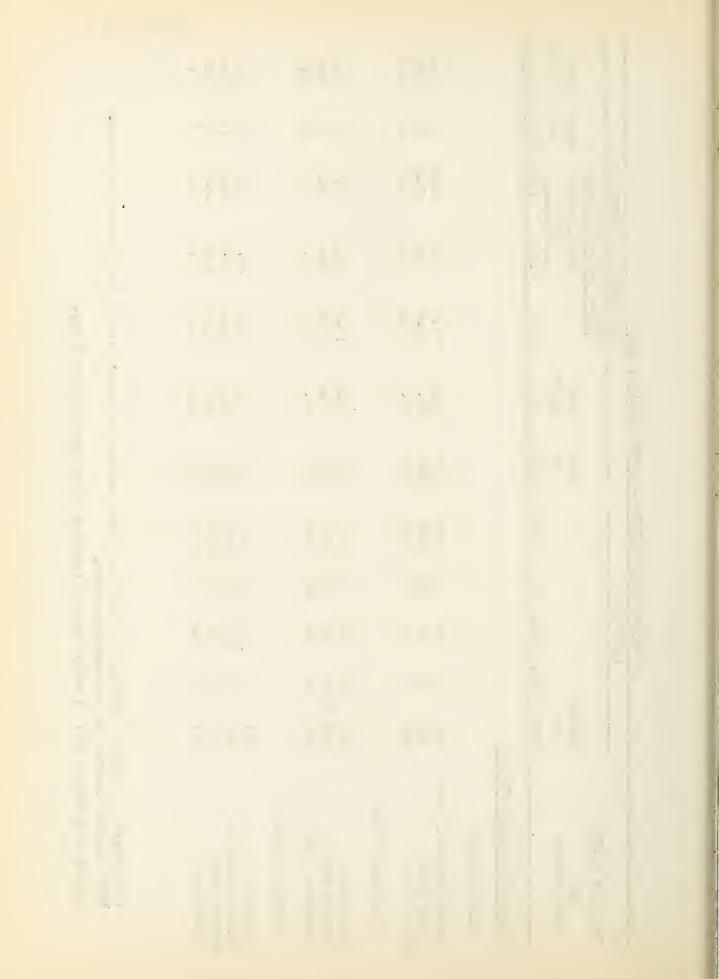
• •

1952
H
APRI 1
巨
ನ
- ABOUT
JEXS
SURVEYS
SNOW
OREGON

			LOCATION	N				SNOW COY	SNOW COVER MEASUREMENTS	REMENTS		
DRAINAGE BASIN								Water (Content (In.)	(In.)		
and SNOW COURSE	Number or	ž.				Date	Snow Depth		Same Approxed	prox.	Years of	Av.Water Content
	State	Sec	Twp	Range	Eleve	Survey	(In•)	1952	1921	1950	Record	Record (Inches)
WILLAMETTE VALLEY STREAMS	SIMIS											
SANDY RIVER1												
Phlox Point-Mt. Hood	452	9 y	38	9E	5600	3/27	157 • 4	76.2	79.7	86.9	15	62 9 7 8 7
*Clear Lake	361	3 6 8	4S	祖のの	3500	3/28	42.6	17.8	18.4	25.6	38	14.1
CLACKAMAS RIVER												
*Clear Lake	361	29	4S	36	3500	3/28	42.6	17.8	18.4	25.6	20	14.1
Peavine Ridge	591	14&15	60 80 80 80 80 80 80 80 80 80 80 80 80 80	7.E	3500	3/31	67.0	27.8	26 9	36.2	15	19.6
SANTIAM RIVERS		3		ov Ov) H				1	
Hogg Pass	351	24	138	7 <u>2</u> E	47 55	3/29	139.4	8.09	55.4	58.9	14	42 •6
Santiam Junction Marion Forks	55 55 55 55 55 55 55 55 55 55 55 55 55	1 45	138	7五	3990 2730	3/29	95.8	43.20	31 2	43 •1	d -	23.7
Breitenbush	551	27	Se Se	7E	2325	3/30	24.9	L•6	Θ Θ	1	ω	Ap
												P

lNot strictly a part of Willamette Drainage; these surveys are indicative of West Slope conditions. *Not located directly on this drainage area.

*Equal to greatest April 1 water content recorded since snow surveys began.



1952
٦
APRIL
- ABOUT
SURVEYS
SHOT
OREGON

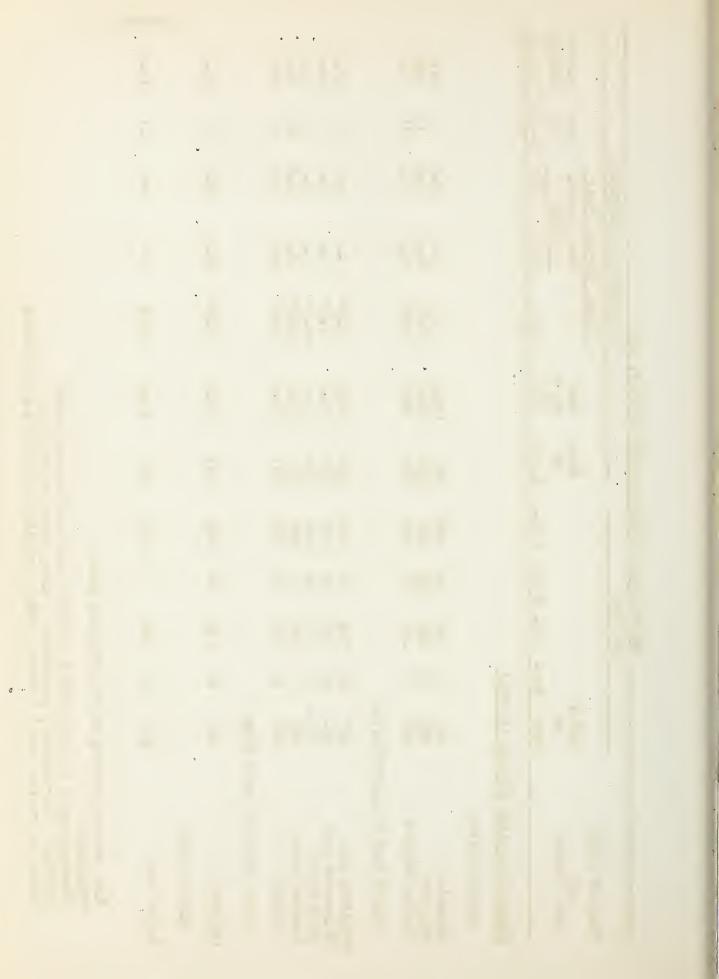
			OLUZIONI DILONI	- 1	DOT! A TITO	TOOOTS	67 (1717 17)	130F				
		H	LOCATION	5				SNOW COV	SNOW COVER MEASUREMENTS	REMEINTS		
DRAINAGE BASIN								Water C	Water Content (In.)	(u•)		
and SNOW COURSE	Number					Date	Snow Depth		Same Approxo	proxe	Years	Av.Water Content
	State	Sec	Twp.	• Range	Elev.	Survey	(In.)	1952	1821	1950	Record	(Inches)
WILLIMETTE VILLEY STREIMS (Contad)	MS (Con	t td)										
MCKENZIE RIVER												
McKenzie	531	35	158	7是五	4800	4/6	140.4	9•09	51.5	65.8	14	41.3
Hogg Pass	351	24	138	7點	4755	3/29	139.4	8.09	55 • 4	58.9	14	45.6
Santiam Junction	552	14	138	73 22	2990	3/29	8° 30°	43•2e	31.2	43-1	I	23 • 7
MIDDLE FORK WILLAMETTE RIVER	TE RIVER											
*Charlton Lake	327	23	218	6E	5750	3/28	116.4	49.6bc	i	ŧ	Ħ	26.1
Willamette Pass	323	21	248	52 13 13 13 13 13 13 13 13 13 13 13 13 13	2600	3/23	166.0	64.6bc	49.0	54.0	∞	40.4
Waldo Lake	521A	15	218	E E	2200	3/28	114.7	50.1bc	40.6	45.9	14	27 •8
Casoade Summit	321	7	238	E E	4880	3/31	121.8	54.5bc	40.6	51.3	22	30.5
Champion	522	12	233	Ħ	4500	3/31	132.4	59 . 25c	29.8	4,649	ដ	26.3
COAST FORK WILLAMETTE RIVER	E RIVER											
Champion	522	75	238	E	4500	3/31	132,4	59.2bc	29.8	46.9	13	26.3
MARY'S RIVER												
Mary's Peak	541	21	128	711	3620	4/6	54.0	25.48	Į,	ì	11	10.3

*Not located directly on this drainage area.

bGreatest April 1 water content recorded since snow surveys began. a Telephonic

Createst water content, regardless of date, since record began.

• Equal to greatest April 1. water content recorded since snow surveys began.



1952
APRIL
ABOUT
1
SURVEYS
SNOW
OREGON

		H	LOCATION	N				SNOW COV	SNOW COVER MEASUREMENTS	EMENTS		
DRAINAGE BASIN								Water C	Water Content (Ine)	(ne)		
and SNOW COURSE	Number or					Date	Snow Depth		Same approxo	roxo	Years	Av.Water Content
	State	Sec.	Twp	Range	Elev.	Survey	(In.)	1952	1951	1950	Record	(Inches)
		٥١	(S) (S)	N O U	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	T ID R	AINAG	田				
UMPQUA RIVER												
¢	c C	C	č C	ć		66/2	0 00 1	she es	r C	7	5	ń R
Windigo fass	747.	3 6	0.07	리 [5 0 V	000c	2/20	90°07	000°00	T•00	30 OF	9 7 7	00°
Who lebock	7577		373	2 CE	5140	3/29	137.2	58.1bc	23.53	47 1	5 4	33.9
Champion	522	12	233	H	4500	3/31	132.4	59.2bc	29.8	46.9	13	26.3
NeUmpqua nrelake Creek	742	19	268	至9	4215	4/1	67 • 3	27 .7 bc	20.05	22.8	15	11.9
Trap Creek	741	r-I	27.8	4正	3800	3/26	8.99	24.0bc	19.4	18.4	15	11.3
ROGUE RIVER												
Wagner Butte	7213	Н	40S	111	0069	3/31	73.9	30°0pc	13.7	21.07	17	16,9
Seven Lakes No. 1	7211	83	34S	5正	6800	Rep	Report Delayed	pe	72.4	74.5	16	56.9
Big Red Mountain	729	31	40S	H	9009	Rep	Report Delayed	pe	22.3	29 • 3	16	28.0
Little Red Mountain	7210	25	40S	ZW	6500	Rep	Report Delayed	pa	16,03	.22.5	16	21.9
*Fark Headquarters	828	ω	318	田9	6450	3/31	198.4	90°2pc	72.5	65,96	ω	61.5
Scragg Mountain	7220	တ	47 N	TOW	6200	4/5	123.7	62.3bc	*30.4	40.0	임	26 •0
Seven Lakes No. 2	7212	56	333	5足	6200	Rep	Report Delayed	pq	45.9	52.0	16	
*/innie Spring	831	13	318	E 9	8109	3/31	175.9	77.3bc	58.5	52.3	13	44.5
*Fourmile Lake	7223	တ	368	2区	0009	3/31	95.9	1	i	1	0	1
Grayback Peak	727	တ	40 S	511	0009	4/4	109.4	50.5	18.7	30 •0	16	24.5
Billie Creek Divide	722	30	36S	5臣	2300	3/23	93.0	33.7	21,0	30.5	22	
**************************************	+ 1 + 2		\$ • •	0								p•

*Not located directly on this drainage area.

bGreatest April 1 water content recorded since snow surveys began. cgreatest water content, regardless of date, since record began.

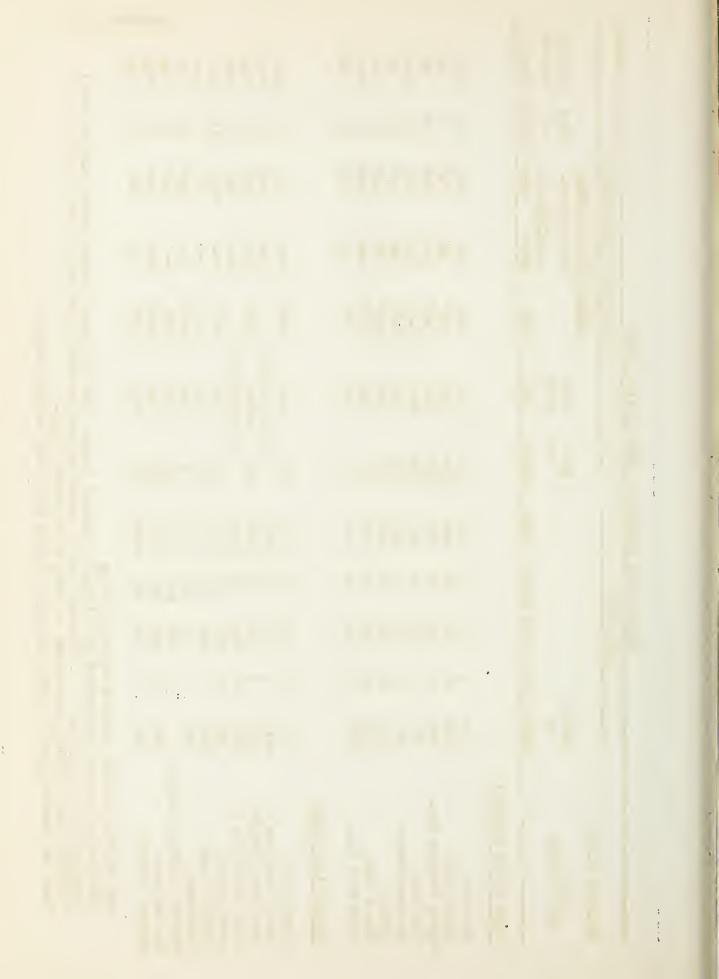
x • . . .

		H	LOCALION	N				SNOW COV	SNOW COVER MEASUREMENTS	REMENTS		
DRAINIGE BASIN								Water (Content (In.)	In.)		
and SNOW COURSE	Number					Dute	Snow Depth		Same Approx. Date	proxe	Years	ivo-Water Content
1	State	Sec	Twp	Range	Elev.	Survey	(In.)	1952	1961	1950	Record	(Inches)
RCGUE RIVER (Cont'd)												
Whaleback	7217	w	318	23至	5140	3/29	137.2	51.8b	33.3	47 •1	14	33.9
Hobart Lake	7221	17	40S	3E	5010	3/29	22.6	9 • 3p	1.5	6.7	4	5.6
*Hyatt Prairie Res.	723	15	398	3臣	4900	3/28	45 • 7	17 •5bc	6.8	13.8	13	8.6
Fish Lake	725	63	378	4E	4865	3/30	58.2	23.0	10.2	21.4	13	12.4
Siskiyon Summit	728	17	40\$	23	4630	3/29	37.8	17.7b	1.0	5.7	16	5.4
Althouse	7216	17	418	770	4400	3/31	59.9	24-3b	1. 6	14.5	12	2.9
Silver Burn	7219	30	308	4正	3720	4/1	62.2	56 e 6bc	14.0	23.0	15	10.3
South Fork Canal	7218	12	338	3E	3500	4/1	17.9	7.4€	0.0	0•9	15	1.1
KLAWATH LAKE BASIN									,			
Summer Rim	841	15	338	16E	7200	3/28	80.1	35.5bc	20.5	20.4	15	16.4
Seven Lakes No. 1	7211	63	34S	5E	0089	Rep	Report Delayed	ed	72.4	74.5	91	56.9
Park Headquarters	838	80	318	SE SE	6450	3/31	198.4	80°2pc	72.05	65.6	∞	61.5
Seven Lakes No. 2	7212	56	33 S	5.	6200	Rep	Report Delaye	77	45.9	52.0	91	42.5
innie Spring	831	19	318	6E	6018	3/31	175.9	77.3bc	58•5	52.3	13	44.5
Fourmile Lake	7223	တ	368	5 E	0009	3/31	95 ° 9	1	1	1		1
Strawberry	837	4	S 07	16E	2600	4/4	42.0	18.2bc	9•9	10.62		5.7
*Quartz Mountain (COPCO)	$\overline{}$	33	37.8	16E	5504	4/5	23.5	0.01	1	5.47	ଷ	4.5
Sun Mountain	836	22	328	7 <u>3</u> E	5350	3/28	114.9	47.4bc	35.8	28.8	15	26.9
*Quartz Mountain	811	ત્ર	388	16E	5320	4/5	24.8	12.9a	3.3	2.4	21	4.1

(COPCO)-Water content determined by melting a measured sample (The California Oregon Power Coois Station)

**Relephonic or telegraphic bGreatest April 1 water content recorded since snow surveys begane Greatest water content, regardless of date, since record begane *Not located directly on this drainage area.

^eEqual to greatest April 1 water content recorded since snow surveys began.



			LOCATION	Z		,		SNOW COV	SNOW COVER MEASUREMENTS	REMENTS		
DR.INGE BASIN								Water C	Content (In.)	In.)		
and SNOW COURSE	Number or					Date of	Snow Depth		Same Approx. Date	proxe	Years	Av Mater Content
	State	Sec	Twp.	Range	Elev.	Survey	(In.)	1952	1951	1950	Record	(Inches)
KLAMATH LAKE BASIN (Cont'd)	1t 1d)											
Billie Creek Divide	722	8	36 S	5至	5300	3/23	93.0	33.7a	21.0	30 • 2	22	22 •3
Crowder Flat	Calif.	30	47 N	11E	5200	Not		•	0.0	0.0	12	0.1
Taylor Butte	842	16	333	11E	5100	4/2	36.0	14.4bc	2.2	5.6	15	3.2
Lake of the Woods	835	11	37 S	5瓦	4960	3/30	57.6	21.5b	රුදු	13.0	15	9•3
Hyatt Prairie Res.	723	35	298	3臣	4900	3/28	45.7	17.5bc	6 <u>.8</u>	13.8	13	8•€
Gerbor	839	75	398	3年	4850	4/1	9•3	4.0	ł	1	Н	0.0
Bly 101 Ranch (COPCO)		22	358	14臣	4800	3/31	5.0	0,8fd	0,0	0	23	E
Chemult	834	21	27.8	8日	47 60	4/1	50.4	21.4bd	11.0	14.2	15	8.0
Years ey (COPCO)		50	318	113	4600	3/31	14.8	5 •9b	0.0	0.0	21	0.5
Kirk (COPCO)		Н	333	7压	4533	4/1	31.0	40° 2	E⊣	2.66	20	1.7
Beatty (COPCO)		22	368	12 E	4300	3/31	0.0	0.0	0.0	0	24	E⊣
Crystal (COPCO)		56	34S	Œ	4200	3/31	36.8	8.4af	10.2	12.6	22	5.2
Harriman Lodge (COPCO)		ಣ	368	9	4200	4/1	22.5	વ 8 • 8	0.0	4•0	53	0.8
Chiloquin (COPCO)		34	34S	7压	4187	3/31	E	E	0.0	0.0	24	0.1
Fort Klamath (COPCO)		22	338	7些形	4150	3/26	36.2	10.1 bo	0.0	1,1	22	6•0
GOOSE LAKE BASIN												
Camas Creek	9114	വ	398	21E	5720	3/28	57.8	22.1b	12.7	12.6		
Strawberry	837	4	40S	16E	2600	4/4	42.0	18.2bc	9•9	10 •6 ²	Ħ	5.7
Quartz Mountain (COPCO)		33	378	16E	5504	4/5	23.5	10.0	1	5.7		
Quartz Mountain	811	2	388	1 6E	5320	4/5	24.8	15.9a	3.53	5.7		4.1
14 1.08 0 1.54 00 1.54 008 1.5 50 40 00 1.5 40 1.5	+1-t-	יי פייע+	700	200								

*Not located directly on this draimage area.
(COPCO)-Water content determined by melting a measured sample (The California Oregon Power Co.'s Station)
a Telegraphic.

defination of date, since recorded determined began.

bGreatest April 1 water content recorded.

defined began.

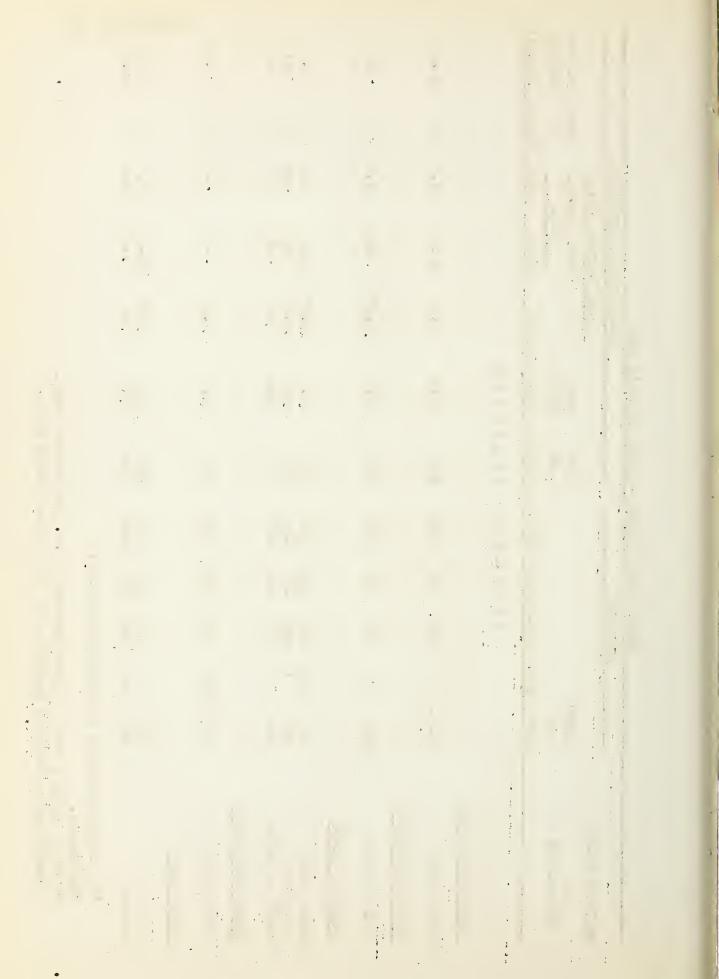
1952
٦
PRIL
ABOUT.
1
SURVEYS
SNOW
OREGON

			のおおり	N ONCE	OKEGON SNOW SOKVEIS	- ABOUT AFRAIL IS	- 1	TADE				
			LOCATION	NO				SNOW COVER MELSUREMENTS	ER MELIST	REMENTS		
DRAINAGE BASIN								Water C	Content (In.	(In•)		
and SNOW COURSE	Number	ė.				Date	Snow Depth		Same Approx.	prox.	Years	Av Water Content
	State	Sec.	Twp.	Range	Elev.	Survey	(In.)	1952	1921	1950	Record	(Inches)
			HI	E I	R I 0 R	I V W O	N 4 GE					
WARNER LAKE BASIN												
*Camas Creek	7116	ιĊ	39.5	21E	5720	3/28	57 ÷8	22.1b	12.7	12.6	13	10.0
GULNO LIKE BASIN Bald Mountain	Nev•1	1.7	45N	213	6720	3/31	27 •7	10.4bc	1.3	2.03	12	2 • 8
CHEMAUCAN RIVER												
*Summor Rim Will Creek *Quartz Mountain	841 922 811	15 1	333 348 388	16E 17E 16E	7200 6200 5320	3/29 3/27 4/5	80.1 46.5 24.8	35.5bc 17.0b 12.9	20 • 5 7 • 2 3 • 3	20.4 9.6 5.7	15 13 21	16 • 4 6 • 1 4 • 1
SIIVER LIKE BLSIN												
Silver Creek	945	25 &26	298	13E	4900	4/1	18.3	q6*9	0.0	0.0	11	9•0
HARNEY BASIN												Appe
Fish Creek Silvies	952	4 55	33S 32S	33E 33E	0069	3/29 3/29	109.7	43.2 bc 26.5	32.8 15.8	27.0	12	24.00 x 13.00 x 24.00
*Not located directly on this drainage area	etly on	this	յ ր նյ ուջ	76 97 65	4							p•

Mot located directly on this drainage area.

aTelephonic.

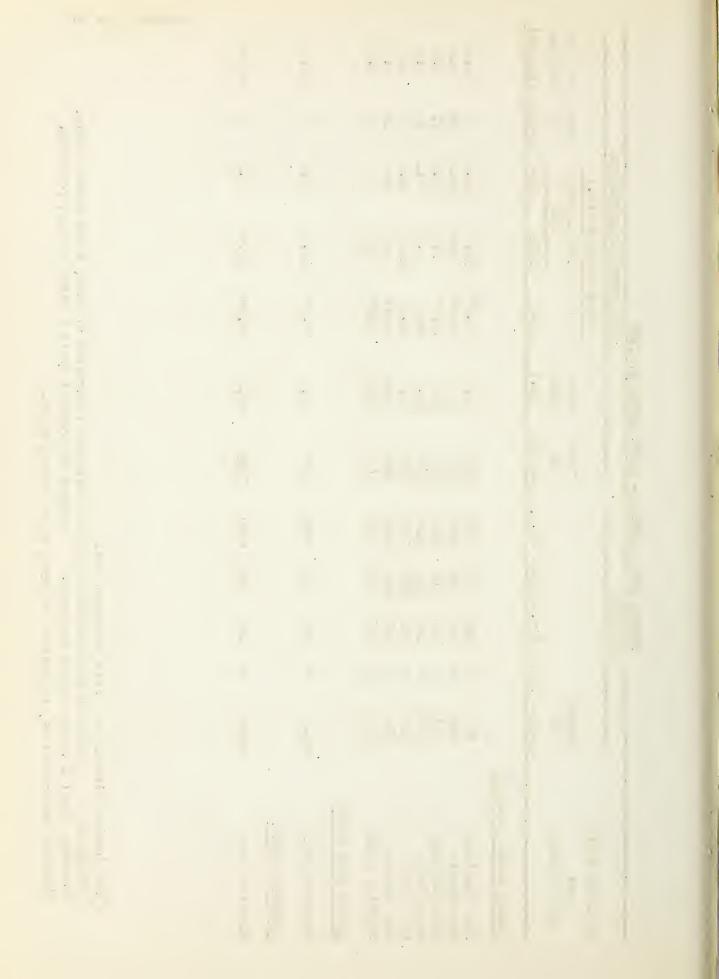
DGreatest April 1 water content recorded since snow surveys began. Greatest water content, regardless of date, since record began.



C C C	7
_	•
AROTT APPTI	
A ROTT	
-	1
CITETATION	1
_	
AVERTAIN MONEY MORREDO	

			LOCATION	NC				SNOW COV	SNOW COVER MEASUREMENTS	REMENTS		
DRAINAGE BASIN								Water C	Water Content (In.)	[n•)		
and SNOW CORSE	Number					Date	Snow Depth		Same Approx. Date	prox.	Years	hv.Water Content
	State	Sec	Twp	Twp. Range	Elev.	Survey	(In.)	1952	1921	1950	Record	Record (Inches)
H.RNEY BASIN (Cont'd)												
Snow Mountain	965	~	198	26E	6300	3/27	58.6	21.5bc	16.2	16.1	ω	14.3
Izee Summit	964	28	168	29臣	5293	3/28	39.1	13.8bd	6.6	10.3	16	7.3
Idlewild Camp	V196	33	208	31E	5200	3/29	29.62	10.5b	6.7	7.8	21	3.5
Starr Ridge	247B	20	158	31E	5156	3/28	29.5	10.5 ^b	5.5	7.1	16	4.63
Lake Creek	136	10	168	32号形	5120	3/29	40.0	15.9b	13.5	13,8	14	9.07
Rock Spring	134	23	185	323	5100	3/29	25.0	9.10	5.5	8.4	16	4.7
Stinking Water	135	33	213	34E	4800	3/25	25.1	9 ° 5pc	000	E-1	13	0.5
ALVORD LAKE BASIN												
*Disaster Peak	Nev.6	ω	47N	34E	0099	3/30	76.4	36.2ab	10.9	7.2	ы	10.8
Mc DERMITT CREEK												
Disaster Peak	Nev. 6	œ	47N	34E	6500	3/30	76.4	36 .2ab	10.9	7 •2	ы	10.8

dEqual to greatest water content measured, regardless of date, since record began. eEqual to greatest April 1 water content recorded. cGreatest water content, regardless of date, since record began. *Not located directly in this drainage area. bGreatest April 1 water content recorded. aTelephonic

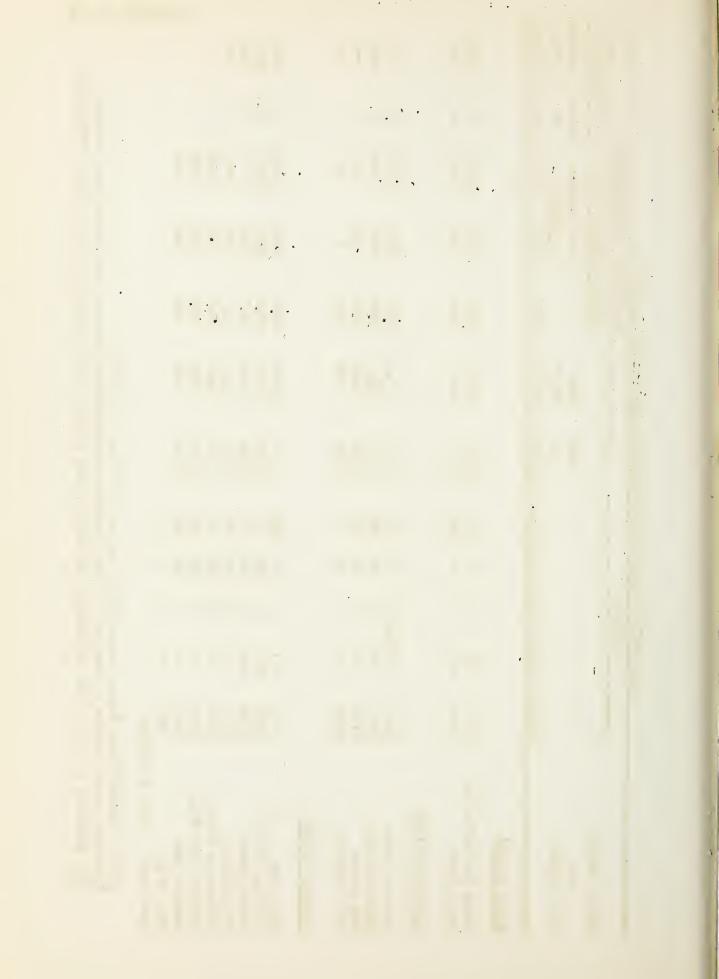


WILLAMETTE VALLEY SWOW PROFILES - ABOUT APRIL 1, 1952

		Ţ	LOCATION					SNOW CO	SNOW COVER MEASUREMENTS	REMENTS		
STREAM BASIN								Water	Content (In.)	In.)	Past	Past Record
and SNOW COURSE						Date	Snow Depth		Same Approx. Date	proxe	Years	Av.Water Content
	Elev.	- 1	Number Sec.	Twp.	Twp. Range	Survey	(In.)	1952	1921	1950	Record	Record (Inches)
SANDY RIVER												
Phlox Point-Mt. Hood	2600	452	9	38	到6	3/27	157 •4	76.2	79.7	86.9	15	62.8
Still Greek	3700	451	52	38	8完日	3/27	69•6	32.9	34.5	42.8	15	23.5
CLACKAMAS RIVER							•					
Peavine Ridge	3500	591	14&15	68	7E	3/31	67,00	27.8	26 • 9	36.2	15	19.6
Clackamas Lake	3400	592	35	58	8 } E	3/27	44.06	16.5	23.2	26.8	듸	15.6
Big Bottom	2118	*	* 25	68	7臣	3/31	28.0	11.0	11.9	1		1
Lake Harriet	2045	*	4	68	7臣	3/30	8.0	1.07	EH	1		ł
S.UTI.M RIVERS												
Hogg Pass	4755	351	24	138	7部	3/29	139.4	80.8	55 • 4	58.9	14	45,6
Santiam Junction	3990	552	74	138	7E	3/29	95.8	43.2	31.2	43.1	11	23.7
Marion Forks	2730	553	28	118	7臣	3/29	54.4	24.7	19.0	32 • 8	#	12.6
Breitenbush	2325	551	21	86	7正	3/30	24.9	9.7	8•9	i	∞	3.9
Whitewater Bridge	2175	*	28	108	7.E	3/29	19.3	10.0	0.9	22.7		
Detroit (new town)	1500+	*	~	108	5至	3/29	0.0	0•0	000	0.0		
Detroit Dam	1580	*	7	108	5臣	3/29	0•0	0.0	0.0	0.0		
Mill City	826	*	53	98 86	3距							
Snow Line: About 1600 feet	feet											

*Auxi liary snow station - average of 3 to 5 samples - measurements taken at same point each survey.

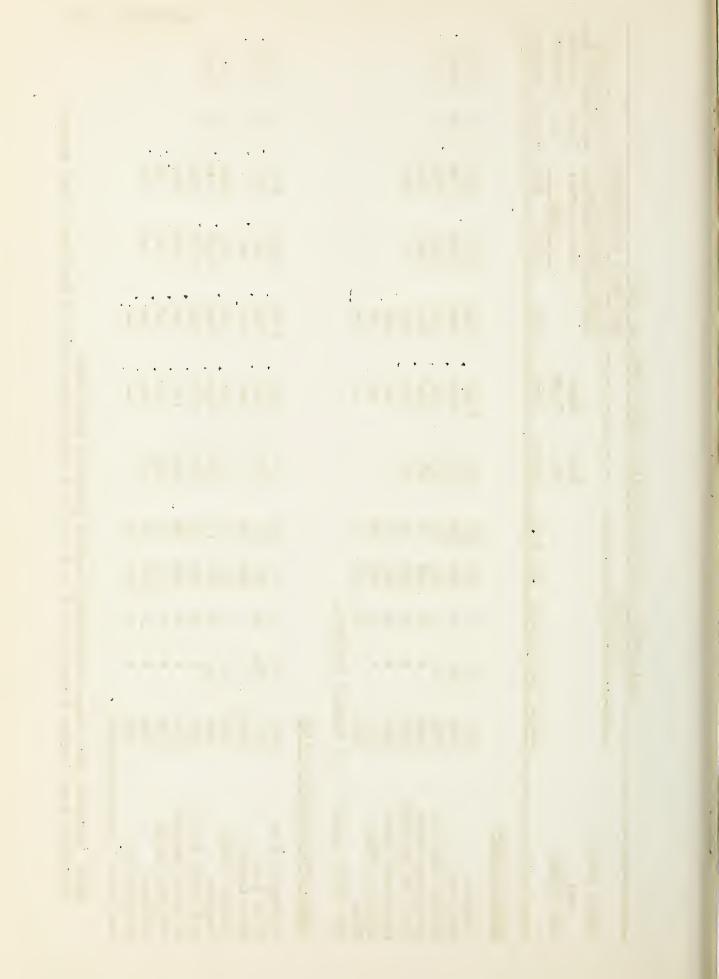
Not strictly a part of the Willamette Drainge; these surveys are indicative of west slope conditions. NOTE: Standard Snow Course measurements unless otherwise indicated.



WILLAMETTE VALLEY SNOWPROFILES - ABOUT APRIL 1, 1952

		NOT I	LOCATION					SNOW CO.	SNOW COVER MELSUREMENTS	R EMEN TS		
STREAM BASIN								Water	Water Content (In.	In.)	Past	Past Record
and SNOW COURSE						Date	Snow Depth		Samo approx. Date	prox.	Year s	Av.Water Content
	Elev.	Number Sec.	Sec	TwD	Twp. Range	Survey	(In.)	1952	1921	1950	Record	(Inches)
WKENZIE RIVER												
Wolkenzie	4800	531	35	15.S	7是	4/6	140.4	9•09	51.5	65 • 8	14	41 .3
Hogg Pass	4755	351	24	138	7EE	3/29	139.4	60 . 8	55.4	58.9	14	42.6
Santiam Junction	3990	552	14	138	7E	3/29	95.8	43.2	31.2	43.1	=	23.7
Dead Horse Grade	3800	*	13	168	7E	4/1	76.0	35 • 7	18.0	43.3		
White Branch Slide	2800	*	15	168	7E	4/1	39.0	15.0	EH	15.0		
Lost Creek Ranch	1956	*	24	165	E B		ł	į	d),			
McKenzie Bridge	1372	*	13	168	5臣		1	ł				
Vidae	8	*	28	168	2選		1	•				
Snow Line: April 1 -	- At Belknap Junction.	ap June	tion.									
MIDDIE FORK WILLAMETTE RIVER	RIVER											
Willamette Pass	5600	323	21	24S	5 <u>3</u> E	3/23	166.0	64.6	49.0	54.0	∞	40.4
Waldo Lake	2200	521A	15	218	6E	3/28	114.7	50.1	40.6	45.9	14	27 •8
Hiway Summit	51281	*	7	238	E		i	ł	!			
Cascade Summit	4880	321	7	238	E E	3/31	121,8	54.5	40.6	51.3	22	30.5
Champion	4500	525	12	238	Ħ	3/31	132.4	59.2	29.8	46.9	13	26.3
Salt Creek Falls	4000	*	33	228	E	3/31	6.97	30.8	21.4	36.4		
Railroad Overpass	27 50	*	27	228	5 B	3/31	14.7	5.6	0.0	10.4		
McCredie Spring	2120	*	36	218	뙦	3/31	0	0•0	0.0	0.0		
Oakridge	1310	*	16	218	3E	3/31	0,0	0.0	0.0	000		
Meridian Dam	750	*	13	198	AT		1	ļ				
Snow Line: About 2500 feet.	feet.											-

NOTE: Standard Snow Course measurements unless otherwise indicated. *Auxiliary snow station - average of 3 to 5 samples - measurements taken at same point each survey.



WILLAMETTE VALLEY SNOW PROFILES - ABOUT APRIL 1, 1952

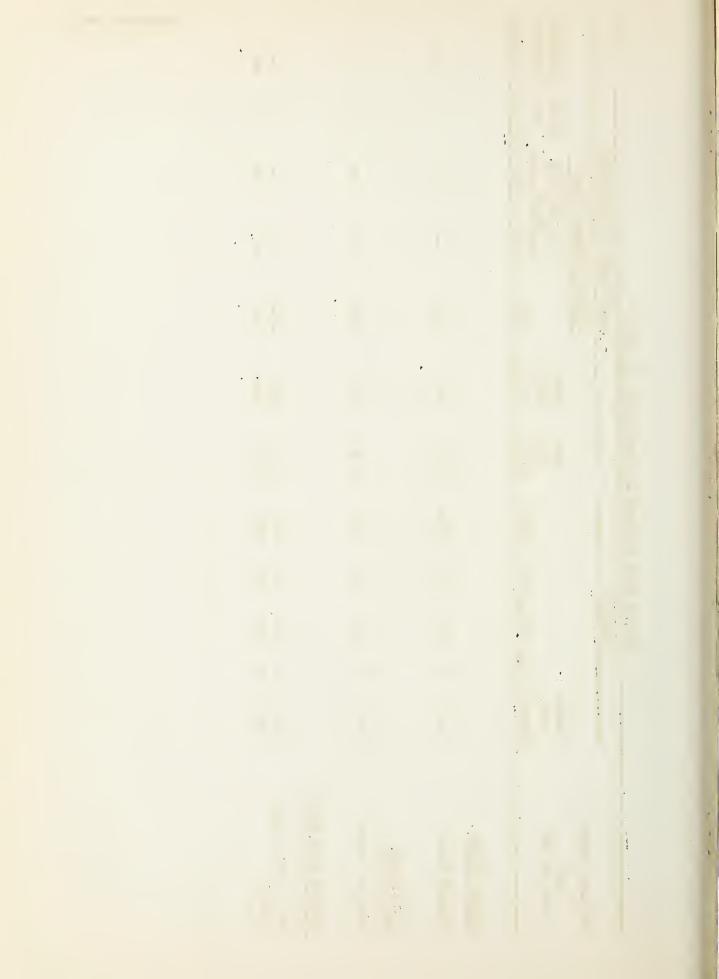
	Past Record	Ay. Water Content	Record (Inches)		26.3								10.3
	Past	Years	Record		13								11
EMENTS	n•)	roxe	1950		46.9	18.0	21.7	1	0.0				1
SNOW COVER MEASUREMENTS	Water Content (In.)	Same Approx Date	1951		29.8	7.7	1	3.7	0.0				i
SNOW C	Water		1952		59.2	20.6	1	10.3	0.0	1			25.4
		Snow	(In•)	ı	132.4	49.8	. 1	25 •0	000	. 1			54.0
		Date of	Survey		3/31	3/31		3/31	3/31				4/6
			Twp. Range		Œ	日	当	田田	呂	Ħ			M2
					233	233	225	228	228	218			125
LOCATI ON			Seco	<u>ن</u>	72	Н	36	35	22	31			21
LOCAT			Number Sec.	Row Rive	522	*	*	*	*	*			541
			Elev.	RIVER (1	4500	3136	2864	2440	1740	1200	feet		3620
	STREAM BASIN	and and SE OURSE		COAST FORK WILLAMETTE RIVER (Row River)	Champion	Golden Curry Creek	Nelson Creek	Weaver Creek	Lund Park	Layng Creek R.S.	Snow Line: About 1700 feet.	MARY'S RIVER	Mary's Peak

*Auxiliary snow station--average of 3 to 5 samples--measurements taken at same point each survey. NOTE: Standard Snow Course measurements unless otherwise indicated. 1Snow absent from measuring site, but present in timber.



1952	
15	
MARCH	
ABOUT	
ŧ	
SURVEYS	
SNOW	
OREGON	

												-
		}	LOCATION	OIV				SNOW CO	SNOW COVER MEASUREMENTS	ENTS		
DRAINAGE BASIN							•	Water	Water Content (In.)			
and ShOW COURSE	Number					Date of	Snow Depth		Same Approx. Date		Years	Av.Water Content
	State Sec.	Sec		Twp. Range	Eleve	Survey	(In•)	1952	181 18	1950 Re	cord	Record (Inches)
UMPQUA RIVER												
Diamond Lake	743	23	27.8	至9	5315	3/15	96 •2	58.1	1	ı	0	ı
ROGUE RIVER												
Siskiyou Summit	728	17	40S	2正	4630	3/15	51.4	19.9	!	1	0	ı
KLAMATH LAKE BASIN												
Lake of the Woods	835	H	378	5五	4960	3/16	61.3	22.3	1	ļ.	0	ł
Gerber	839	12	398	13E	4850	3/15	19.4	7.2	:	Į,	0	ŧ



22

10.6

23.0

55.5

3/1

4200

GE

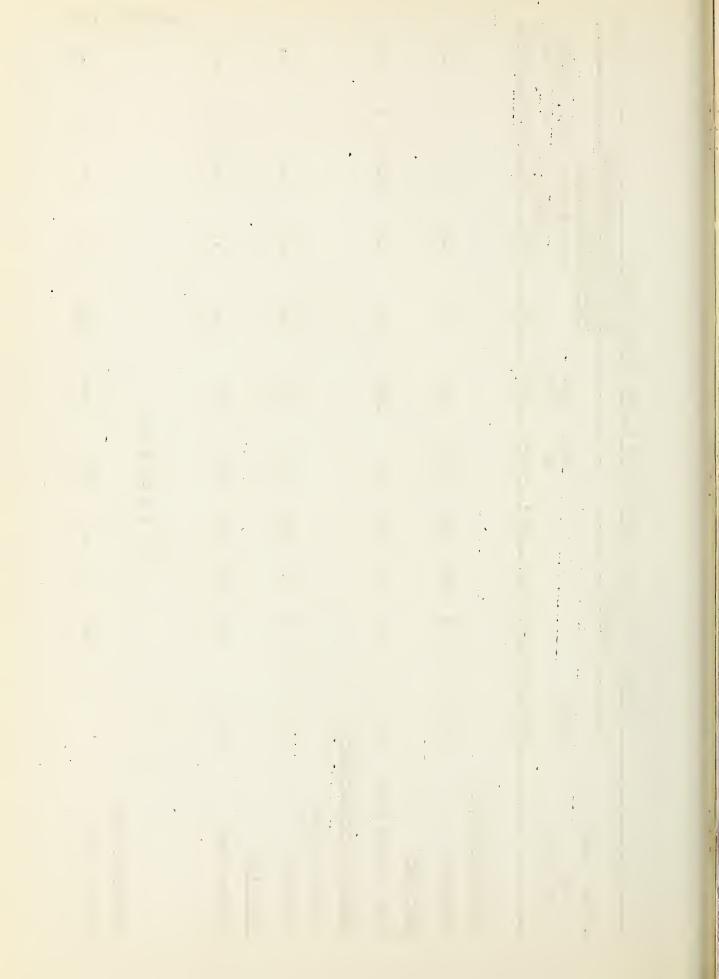
348

26

Crystal (COPCO)

DRAINAGE BASIN		LOCATI	TION				SNOW CC	Water Content (In.)	EMENIO n•)		
and SNOW COURSE	Number				Date	Snow Dep th		Same Approx.	roxe	Years	Years Av.Water of Content
	State Sec. Twp.	ec. Tw		Range Eleve	Survey (In.)	(In.)	1952	1921	1950	Record	1951 1950 Record (Inches)

						4							
GRANDE RONDE RIVER													
Schoolmarm	248	28	4S	34E	4775	3/10	23.4	7.1	4.6	i	က	4.0	
HOOD RIVER													
Tilly Jane-Mt. Hood	432	15	23	9E	0009	3/2	132.2	54.4	44.2	53.8	4	49.0	
WILLAMETTE VALLEY STREAMS SANTIAM RIVERS	SI												
Brei tenbush	551	21	9 S	7臣	2325	2/28	29.1	10.2	4.3	ŧ	O)	4.1	
ROGUE RIVER													
Siskiyou Summit	728	17	40S	2E	4630	3/7	49-1	22.0	3.7	8	16	5.9	
				اد	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	CHIO	z						_
KLAMATH LAKE BASIN													-



OREGON PRECIPITATIONa

	CURRENT	YEAR	LAST	YEAR
DRAINAGE	Oct. 1,1951-A	pril 1,1952.	Oct. 1,1950-	April 1,1951
DIVISIONS	P	D	P	D
Southeastern	7.66	+ 1.85	6.88	+ 1.01
Southcentral	8.24	+ 2.18	9,11	+ 2.88
Central	7.99	+ 0.73	11.01	+ 3,80
Columbia River	10.88	- 0.29	16.65	+ 5.60
Wallowa Mountains	10.16	- 1.12	10.17	~ 0.38
Blue Mountains	10.15	+ 0.52	9.17	+ 0.82
Southern	27.53	+ 8.10	28.73	+10.02
Willamette Valley	45,30	+ 4.79	58 . 33	+19.00
P - Inches F	recipitation	D - Inc	hes Departure	from Normal
Southeastern	- Malheur a	nd Owyhee dr	ainages.	
Southcentral	- Interior	Basin draina	ges and Goose	Lake.
Central	- Deschutes	and Crooked	drainages.	
Columbia River	The state of the s	•	Walla Walia,	The state of the s

drainages.

Wallowa Mountains

Blue Mountains

Southern

Silvies and Malheur drainages.

- Umpqua, Rogue and Klamath drainages.

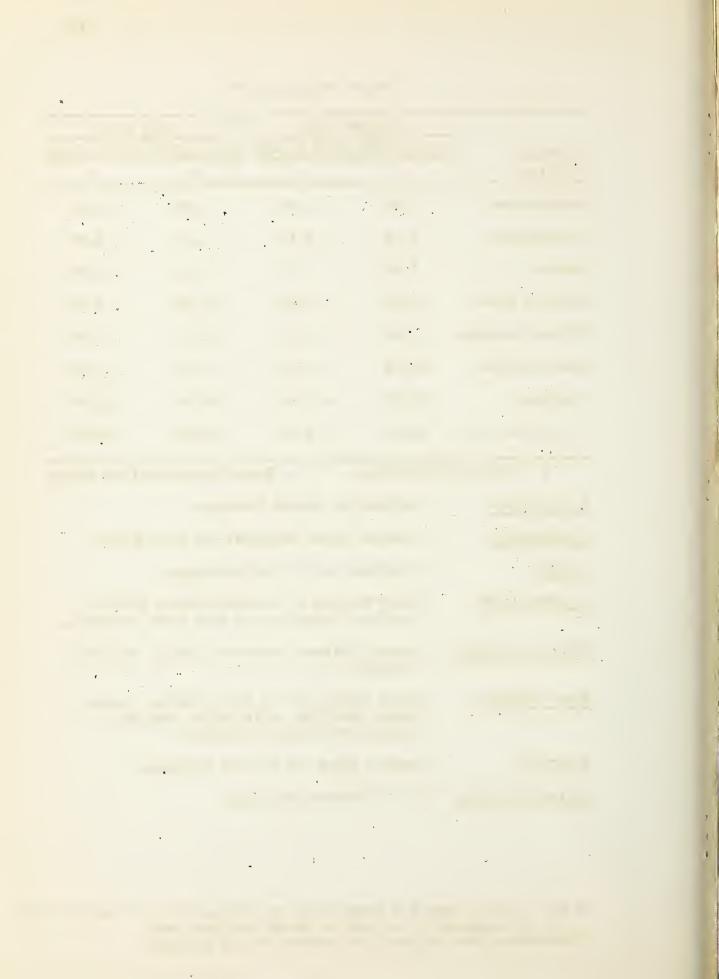
- Imnaha, Wallowa, Catherine, Eagle, and Pine

- Upper valleys of the Burnt, Powder, Grande Ronde, Umatilla, Walla Walla, John Day,

Willamette Valley - All Willamette drainages.

NOTE: Stations used for determining the averages for the current year are not necessarily the same as those used last year.

aPreliminary data computed from Weather Bureau records.



STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers

FEDERAL

Department of Agriculture
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
Department of National Defense
Army Engineer Corps

PUBLIC UTILITIES

California-Pacific Utilities Company Portland General Electric Company The California Oregon Power Company

MUNIC IPALITIES

City of Baker City of Corvallis City of La Grande City of The Dalles

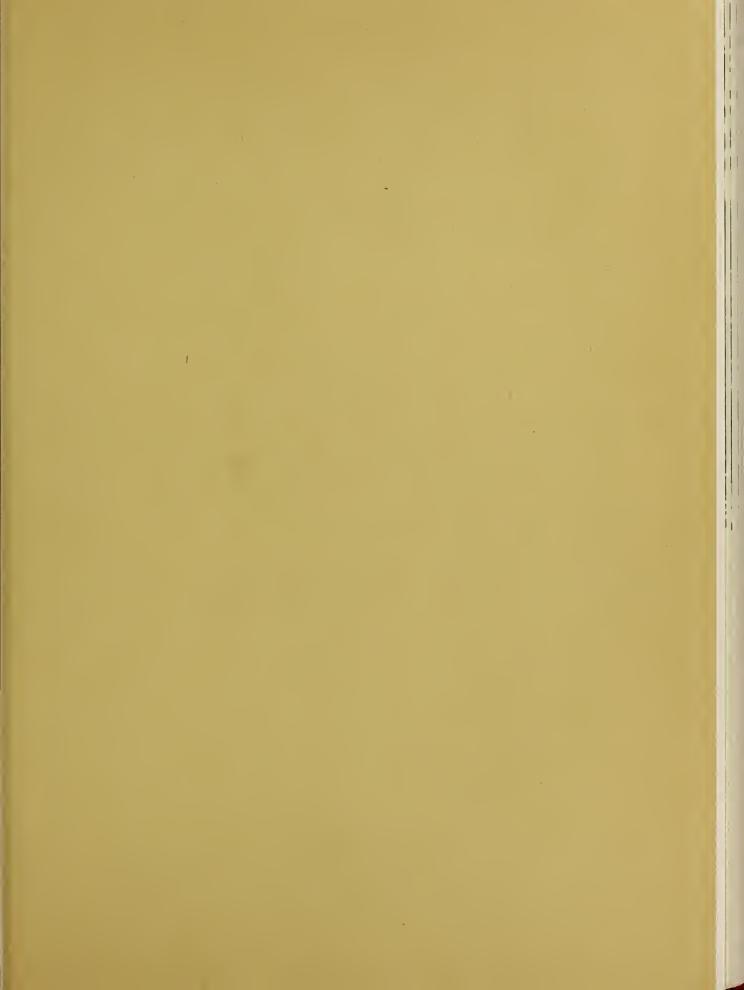
IRRIGATION DISTRICTS

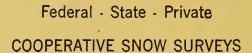
Associated Ditch Companies
Central Oregon Irrigation District
Deschutes County Municipal Improvement District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valley Irrigation District
Lakeview Vater Users Incorporated
Medford Irrigation District
Ochoco Irrigation District
Rogue River Irrigation District
Talent Irrigation District
Vale-Oregon Irrigation District
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company South Wasco Soil Conservation District The Crag Rats, Hood River, Oregon







Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"